

New San Diego Central Courthouse- Traffic Impact Analysis Report

Prepared for
Administrative Office of the Courts

Prepared by



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EXECUTIVE SUMMARY

The Administrative Office of the Courts (the “AOC”) has proposed construction of a New San Diego Central Courthouse in the downtown area of the City of San Diego (the “City”). This study analyzes the forecast traffic impact of the proposed courthouse project. The proposed location is bound by B Street to the north, C Street to the south, State Street to the east, and Union Street to the west. An office building and a pay parking lot currently occupy the site.

The proposed project will include 71 courtrooms. Of the 71 courtrooms, 59 will be relocated from the existing courthouse immediately east of the proposed project site. Ten of the 71 courtrooms will be relocated from the Madge Bradley and Family Law Courthouse several blocks east of the proposed site. One courtroom will be relocated from Kearney Mesa and one new courtroom will be added. Sixty of the 71 court rooms will provide for jury trials, and the remaining courtrooms will serve probate, family court, and small claims and will not have a jury call. Only two of the courtrooms, the new courtroom and the relocated courtroom from Kearney Mesa, will generate new trips into downtown.

Construction of the new building will displace one existing office building and a public parking lot (181 spaces). The AOC will also demolish the County Courthouse and Old Jail, which provide space for County of San Diego employees and employees supporting detention operations in the Old Jail. The removal of these buildings will reduce the traffic, parking demand, and parking supply in the study area. The AOC has no current plans to redevelop the existing County Courthouse site. The Madge Bradley and Family Law Courthouse will provide office space for other tenants.

The proposed project will generate approximately 134 new trips per day. Another 721 trips per day will redistribute through downtown to account for the relocation of the Madge Bradley and Family Law courthouses. Combined, the redistribution of trips and the new trips will generate approximately 385 new trips during the a.m. peak period.

In addition to evaluating traffic operating conditions, this report also discusses the project’s parking demands. The proposed courthouse will provide approximately 60 on-site underground spaces for judges and key courthouse staff. All others will be required to park off site in the existing surface parking lots, public parking structures or on the street. In addition to the existing offsite demand, a total of 370 parking spaces will be needed to serve the new courthouse.

This study analyzed the traffic operating conditions for the following intersections and roadway segments:

Study Intersections

- Ash Street / Union Street
- Ash Street / Front Street
- First Avenue / A Street
- B Street / State Street
- B Street / Union Street
- B Street / Front Street
- C Street / State Street
- C Street / Union Street
- Broadway / State Street
- Broadway / Union Street

Study Roadway Segments

- Ash Street: Columbia Street to State Street
State Street to Union Street
Union Street to Front Street
Front Street to First Avenue
- A Street: Columbia Street to State Street
State Street to Union Street
Union Street to Front Street
Front Street to First Avenue
- B Street: Columbia Street to State Street
State Street to Union Street
Union Street to Front Street
- C Street: Columbia Street to State Street
- Broadway: Kettner Boulevard to India Street
Union Street to Front Street
Front Street to First Avenue
- State Street: Ash Street to A Street
B Street to C Street
C Street to Broadway
- Front Street: Ash Street to A Street
A Street to B Street
- First Avenue: Ash Street to A Street
A Street to B Street

This traffic impact study was prepared in accordance with the City of San Diego Traffic Impact Study Manual (2003). The City's goal for acceptable levels of service is LOS D or better at signalized intersections and along roadway segments. Existing a.m. peak hour and daily roadway segment traffic volume was collected specifically for this study in April 2010. Operational analysis shows all intersections and roadway segments operate at LOS D or better.

Project-generated trips calculated were based on rates established for similar facilities, categorized into jury and non-jury trials. Trips were then to the roadway network, and added to the existing a.m. peak hour and daily volumes to determine the short-term project impacts. The addition of the forecast project-generated trips to the existing conditions does not change the LOS from acceptable to deficient at the study intersection or along study roadway segments. Therefore, there are not forecast significant impacts for the study intersections and segments under Existing Plus Project conditions.

The AOC forecasts that the project will open in the year 2016. To evaluate traffic operations for the project opening year, a growth rate factor of two percent per year was applied to all existing conditions traffic volumes. The growth factor is based on existing ADT volumes and forecast year 2030 ADT volumes reported in the Downtown Community Plan Update. This report evaluates cumulative condition with and without the proposed project.

Based on City of San Diego significant impact thresholds, no direct project impacts are identified for Existing or Cumulative conditions. Therefore, no mitigation is required.

The project will provide approximately 60 on-site parking spaces for judges and key court staff. All other vehicles will park off-site in public parking lots. An inventory of available public surface parking lots found 874 parking spaces within a three block radius of the project site. A field occupancy survey conducted in March 2010 revealed that at 8:30 a.m., when the peak demand for parking for the courts would be occur, approximately 45% of the total surface parking spaces were unoccupied. The project will need 370 parking spaces to accommodate the forecast a.m. peak period traffic forecast. Clearly this demand could be met by the surface parking spaces alone, with 395 parking spaces available at 8:30 a.m. However, there are over 1,700 public parking spaces available in parking structures near the project site. Therefore, there is sufficient parking within the three block radius to meet the a.m. peak parking demands of the courthouse.

The construction of the new courthouse will result in the removal of a 181 public parking lot. The project will also reduce the demand for parking with the removal of the office buildings that exist on this site and other uses that will be removed with the demolition of the existing courthouse (Old Jail and San Diego County office space). According to the trip generation analysis, the removal trips associated with the demolition of the existing courthouse and the demolition of the existing office buildings on the proposed site will result in a decline in parking demand by as much as 326 vehicles. Therefore, the removal of the parking lot will not negatively impact the parking supply in the project vicinity.

INTRODUCTION

The Administrative Office of the Courts (the “AOC”) has proposed a New San Diego Central Courthouse project in downtown San Diego. This study analyzes the forecast traffic impacts of the proposed courthouse project in downtown San Diego. The project site is adjacent to B Street to the north, C Street to the south, State Street to the east, and Union Street to the west. An office building and a pay parking lot currently exist on the site. Exhibit 1 and Exhibit 2 illustrate the regional vicinity map and the study area map of the project.

Analysts prepared this traffic impact study in accordance with the SANTEC/ITE Traffic Study Guidelines and City of San Diego (the “City”) Traffic Impact Study Manual (2003). The City’s goal for acceptable levels of service (“LOS”) is LOS D or better at signalized intersections and along roadway segments.

This report evaluates the a.m. peak hour intersection and daily roadway segment operations for existing and Year 2016 conditions with and without the proposed project.

PROJECT DESCRIPTION

The proposed project will include 71 courtrooms:

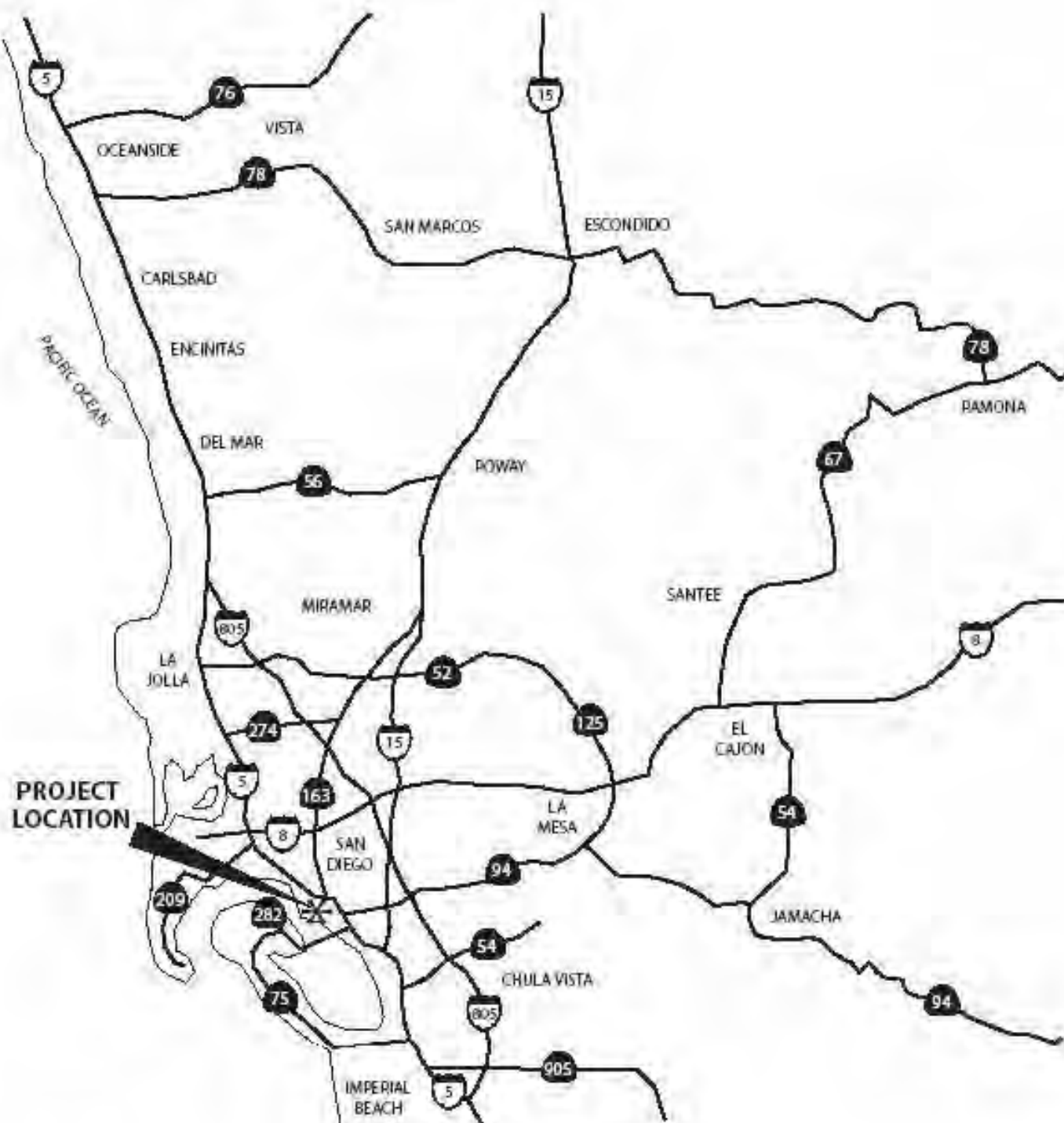
- 59 courtrooms will relocate from existing County Courthouse building, which is adjacent to the proposed courthouse site;
- 10 courtrooms will relocate from Madge Bradley & Family Law Courthouse; 1 court room will relocate from Kearney Mesa; and
- 1 new courtroom will be added.

Of the total 71 courtrooms, only the new courtroom and relocated courtroom from Kearney Mesa will generate new trips into downtown San Diego.

Once the new courthouse is constructed, the Administrative Offices of the Courts (AOC) intends to demolish the existing building. At the time this report was prepared, the AOC had no plans to redevelop the existing County Courthouse and Old Jail sites. The demolition of the existing Courthouse and the existing buildings on the proposed site will result in a reduction in trips within the study area:

- Construction of the new courthouse will displace one existing office building and a public parking lot (181 spaces). The removal of this building will reduce the parking demand and the total trips within the study area.

- Staff of the County of San Diego (the “County”) occupy approximately 56,000 BGSF of the existing County Courthouse. These staff will move to a new location when the AOC prepares to demolish the existing courthouse.
- The Old Jail, located within the existing courthouse, will demolished and will not be replaced within downtown.



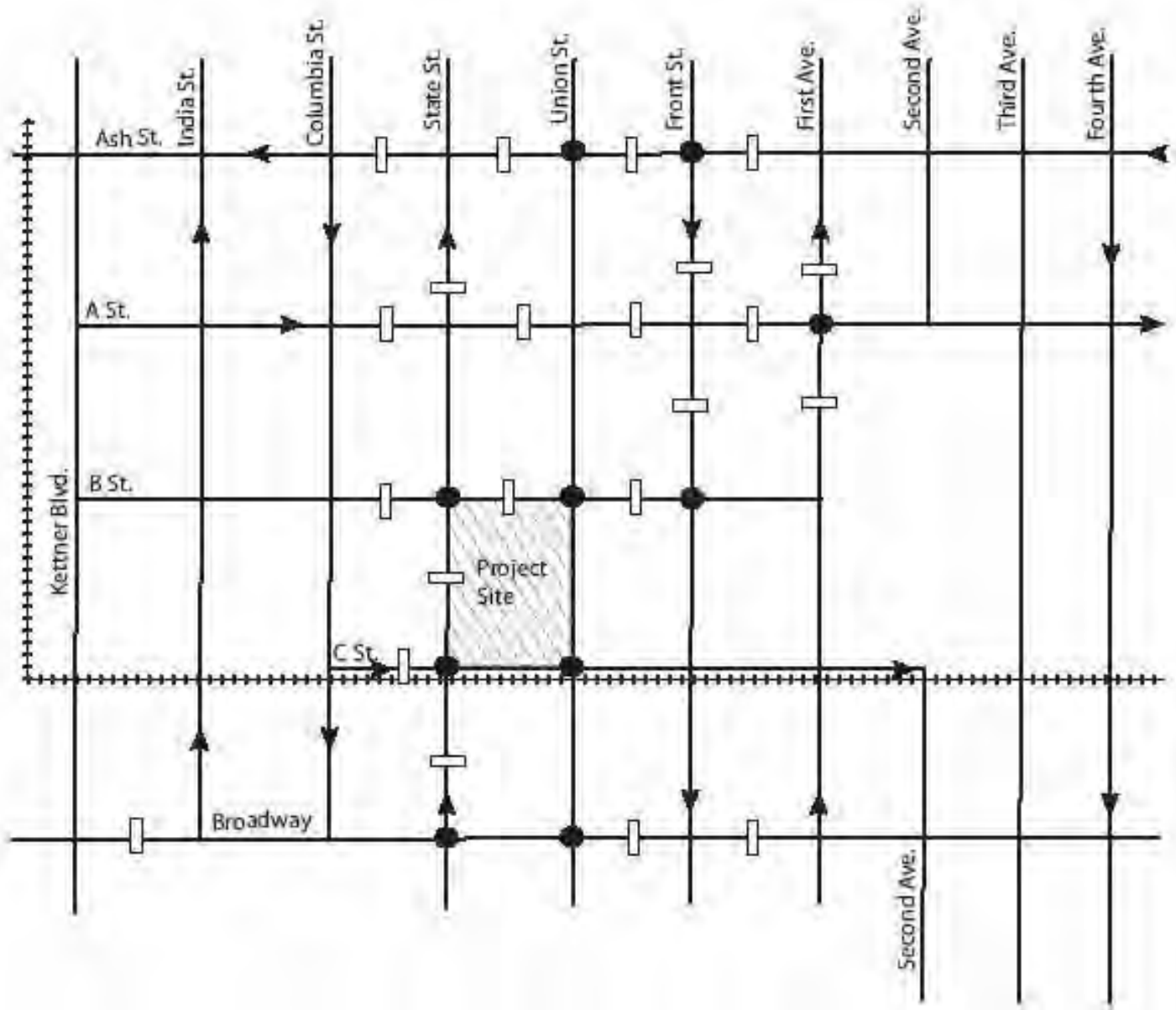
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REGIONAL PROJECT VICINITY

EXHIBIT 1



LEGEND:

- Study Intersection
- Study Roadway Segment
- ▶ One-way
- ▨ Project Site



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STUDY AREA

EXHIBIT 2

STUDY AREA

The project study area is based on the distribution of project-generated trips on the roadway network. The list of study intersections and roadway segments is based on recommendations by City staff and City of San Diego Traffic Impact Study Manual. The traffic study includes all signalized intersections where the project will add 50 or more peak hour project-generated trips. Exhibit 2 shows study intersections and roadway segments.

Based on these thresholds, the study area consists of the following intersections:

- Ash Street / Union Street
- Ash Street / Front Street
- First Avenue / A Street
- B Street / State Street
- B Street / Union Street
- B Street / Front Street
- C Street / State Street
- C Street / Union Street
- Broadway / State Street
- Broadway / Union Street

ANALYSIS METHODOLOGY

In accordance with the City of San Diego Traffic Impact Study Manual, this study analyzes the followings study scenarios:

- **Existing Conditions** – Analysis of existing traffic count volumes, intersection geometry and existing roadway network.
- **Existing Plus Project Conditions** – Analysis of existing traffic volumes overlaid with the forecast project-generated traffic. The existing intersection geometry and roadway network were used in this analysis.
- **Existing Plus Cumulative Conditions (No Project)** – Analysis of existing traffic volumes overlaid with traffic associated with approved or pending projects anticipated to be constructed by the project-opening year.
- **Existing Plus Cumulative Plus Project Conditions** – Analysis of existing traffic volumes overlaid with cumulative project traffic and traffic generated by the proposed project.

This study uses the 2000 Highway Capacity Manual methodology for Signalized Intersections to determine the operating Levels of Service (LOS) of the study intersections. The Highway Capacity Manual (HCM) methodology describes the operation of an intersection using a range of levels of service (LOS) from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on corresponding average stopped delay per vehicle shown in Table 1.

Table 1: Intersection LOS & Delay Ranges

LOS	Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	< 10.0	< 10.0
B	> 10.0 to < 20.0	> 10.0 to < 15.0
C	> 20.0 to < 35.0	> 15.0 to < 25.0
D	> 35.0 to < 55.0	> 25.0 to < 35.0
E	> 55.0 to < 80.0	> 35.0 to < 50.0
F	> 80.0	> 50.0

Source: 2000 Highway Capacity Manual.

The roadway segment analysis of the study area roadways is based upon roadway classifications and capacity thresholds defined in the City of San Diego Traffic Impact Study Manual. The roadway segment level of service criteria is included in Table 2.

Table 2: Level of Service Thresholds for Roadway Segments

Classification (# Lanes)		Level of Service				
		A	B	C	D	E
Primary Arterial (6)		25,000	35,000	50,000	55,000	60,000
Major Arterial	Two-way (6)	20,000	28,000	40,000	45,000	50,000
	One-way (3)	10,000	14,000	20,000	22,500	25,000
Major Arterial	Two-way (4)	15,000	21,000	30,000	35,000	40,000
	One-way (2)	7,500	10,500	15,000	17,500	20,000
Local	Two-way (2)	2,500	3,500	5,000	6,500	8,000
	One-way (3)	4,000	5,500	7,500	9,000	10,000
	One-way (2)	2,500	3,500	5,000	6,500	8,000
Collector	Two-way (4)	10,000	14,000	20,000	25,000	30,000
	One-way (3)	7,500	10,500	15,000	18,750	22,500
	One-way (2)	5,000	7,000	10,000	13,000	15,000
Collector (no center lane (4)) (continuous left-turn lane 2))		5,000	7,000	10,000	13,000	15,000
Collector (2) (no fronting property)		4,000	5,500	7,500	9,000	10,000
Collector (2) (commercial-industry fronting)		2,500	3,500	5,000	6,500	8,000

Source: City of San Diego Traffic Impact Study Manual

The City's goal for acceptable operating conditions is LOS D or better for intersections and roadway segments. The City's Traffic Impact Study Manual identifies thresholds of significance shown in Table 3:

Table 3: City of San Diego Level of Significance Thresholds

LOS with Project	Allowable Change Due To Project Impact					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (sec.)
E (or ramp meter delays above 15 min.)	0.010	1.0	0.02	1	2.0	2.0
F (or ramp meter delays above 15 min.)	0.005	0.5	0.01	1	2.0	1.0

Source: City of San Diego Traffic Impact Study Manual

EXISTING CONDITIONS

Existing Roadway Circulation System

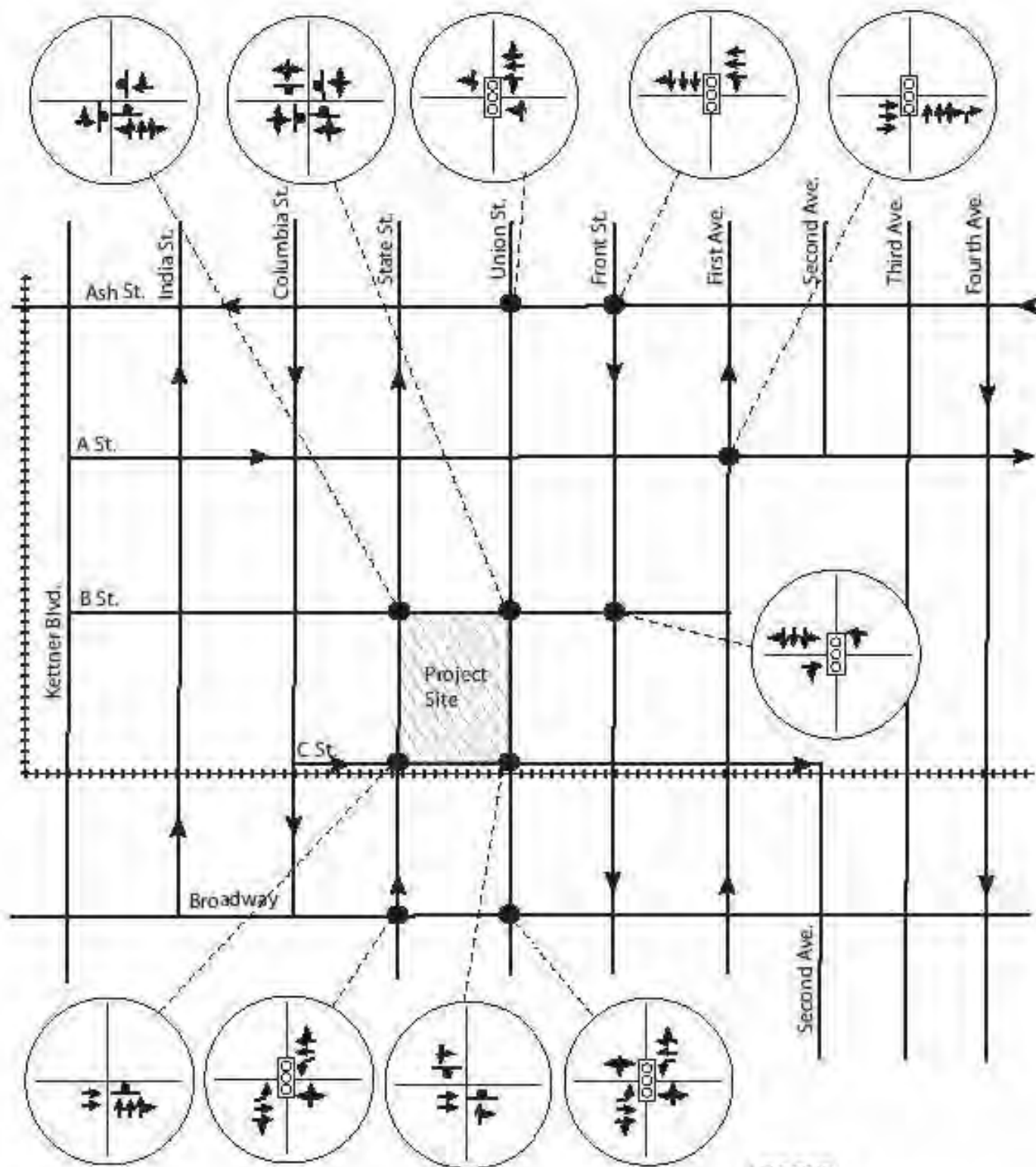
A thorough field investigation of the existing roadway and intersection conditions was conducted specifically for this project. This analysis included traffic signal operations, lanes, parking and other factors that may affect the capacity of the roadway. A description of all existing roadways is provided below. Exhibit 3 shows existing intersection geometry and traffic signal control.

Ash Street is a one-way westbound street providing three travel lanes. Ash Street is a one-way Major Street within the study area. Metered curbside parking is generally provided on both sides of the street.



A Street is a one-way eastbound street providing three travel lanes. A Street is a one-way Major Street within the study area. Metered curbside parking is generally provided on both sides of the street.

B Street is a two-lane street oriented in an east-west direction. B Street is a two-lane Local Street within the study area. Metered curbside parking is generally provided on both sides of the street.

C Street is a one-way eastbound street providing two travel lanes. Trolley tracks runs in between each eastbound travel lane. C Street is classified as a two-lane Local Street within the study area. No curbside parking is provided along C Street.



LEGEND:

-  Stop Controlled Intersection
-  Signalized Intersection



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EXISTING INTERSECTION GEOMETRY

EXHIBIT 3

Broadway is a four-lane divided road oriented in an east-west direction. Broadway is as a Collector Street within the study area. Most intersections through the study area have restricted left turn access from Broadway onto side streets. Metered curbside parking is generally provided on both sides of the street.

Kettner Boulevard is a one-way southbound street from Ash Street to A Street providing two travel lanes and is considered a Major Street within the study area. From A Street to Broadway, Kettner Boulevard is a two-lane Major Street within the study area. Metered curbside parking is generally provided on both sides of the street.

State Street is a one-way northbound street providing three travel lanes. State Street is a one-way Local Street within the study area. Metered curbside parking is generally provided on both sides of the street.

Union Street is a two-lane street oriented in a north-south direction. Union Street is a two-lane Local Street within the study area. Metered curbside parking is generally provided on both sides of the street.

Front Street is a one-way southbound street providing three travel lanes. Front Street is a one-way Major Street within the study area. Metered curbside parking is generally provided on both sides of the street.

First Avenue is a one-way northbound street providing three travel lanes. First Avenue is a one-way Major Street within the study area. Metered curbside parking is generally provided on both sides of the street.

Existing Conditions Levels of Service

To determine the existing operation of the study intersections, intersection movement counts were collected on a typical weekday during the a.m. (7:30 to 9:30 a.m.) peak period. Since the courts typically end judicial proceedings prior to the p.m. peak period, there is no analysis for this time period. Average daily traffic volumes were also collected over a 24-hour period.

Exhibit 4 shows existing a.m. peak hour and daily traffic volumes. Detailed count data is in Appendix A. Table 4 shows the results of the existing conditions a.m. peak hour intersection operating conditions. Detailed Highway Capacity Manual (HCM) calculation sheets are in Appendix B. As shown in Table 4, all intersections are currently operating at an acceptable LOS (LOS D or better) during the a.m. peak hours.

Roadway segment levels of service calculations were conducted based on established capacity thresholds defined by roadway classification and average daily traffic volumes. Table 5 presents the results of the existing conditions roadway segment level of service

analysis. As shown in Table 5, all of the roadway segments operate at acceptable levels of service.

Table 4: Existing Condition Intersection LOS – AM Peak

Study Intersection	Control	Delay - LOS	
Ash Street / Union Street	S	6.2	A
Ash Street / Front Street	S	19.9	B
First Avenue / A Street	S	17.2	B
B Street / State Street	U	9.3	A
B Street / Union Street	U	10.3	B
B Street / Front Street	S	6.1	A
C Street / State Street	U	10.9	B
C Street / Union Street	U	10.5	B
Broadway / State Street	S	0.0	A
Broadway / Union Street	S	8.5	A

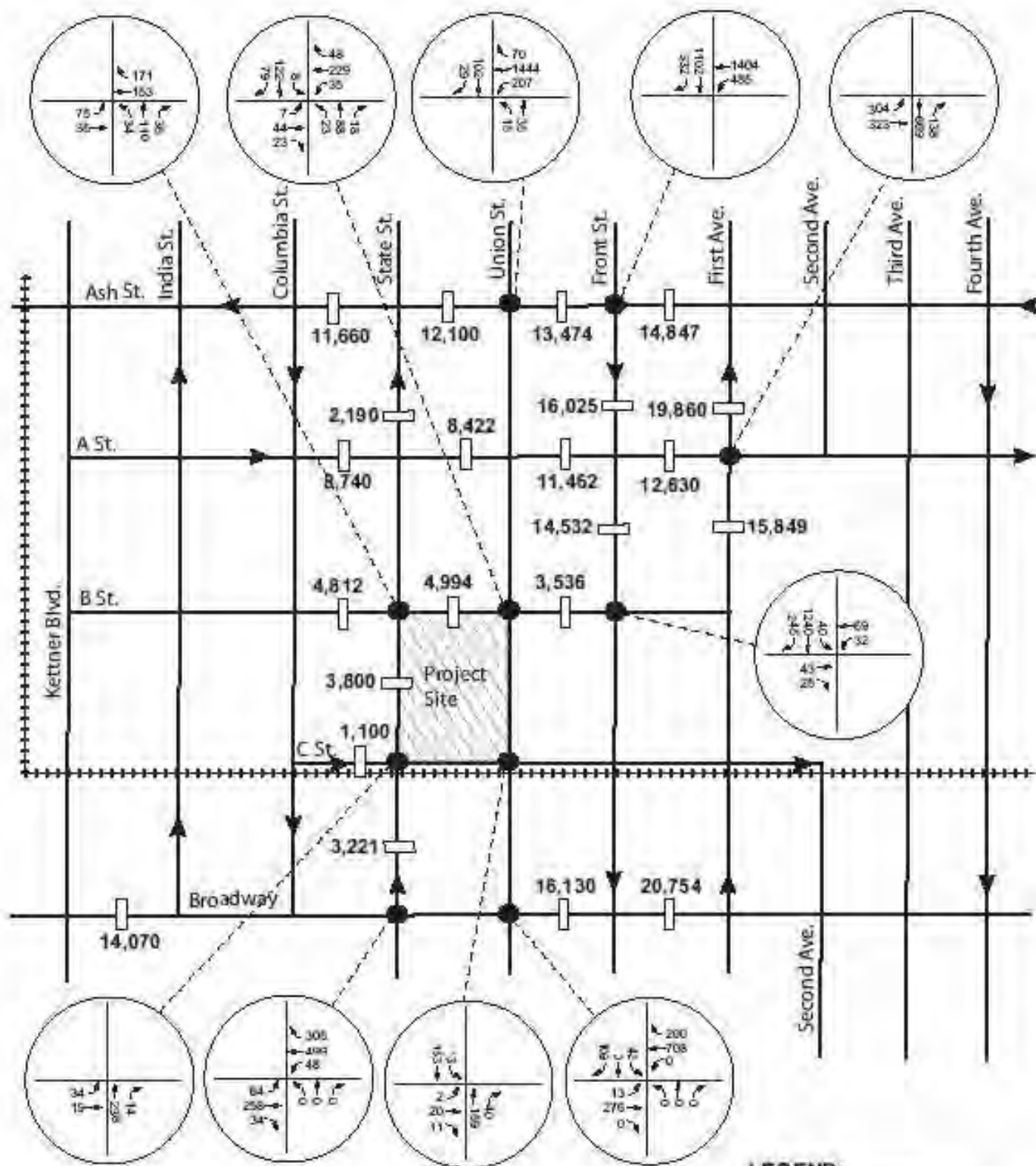
Note: Deficient intersection operation shown in **bold**.

Control: S= signalized , U= unsignalized

Table 5: Existing Conditions Roadway Segment LOS

Roadway	Location	Class (# Lanes)	LOS E Capacity	Existing ADT	V/C	LOS
Ash Street	Columbia Street to State St.	Major one-way (3)	25,000	11,660	0.47	B
	State Street to Union Street	Major one-way (3)	25,000	12,100	0.48	B
	Union Street to Front Street	Major one-way (3)	25,000	13,474	0.54	B
	Front Street to First Avenue	Major one-way (3)	25,000	14,847	0.59	C
A Street	Columbia Street to State St.	Major one-way (3)	25,000	8,740	0.35	A
	State Street to Union Street	Major one-way (3)	25,000	8,422	0.34	A
	Union Street to Front Street	Major one-way (3)	25,000	11,462	0.46	B
	Front Street to First Avenue	Major one-way (3)	25,000	12,630	0.51	B
B Street	Columbia Street to State St.	Local (2)	8,000	4,812	0.60	C
	State Street to Union Street	Local (2)	8,000	4,994	0.62	C
	Union Street to Front Street	Local (2)	8,000	3,536	0.44	C
C Street	Columbia Street to State St.	Local one-way (2)	8,000	1,100	0.14	A
Broadway	Kettner Blvd. to India Street	Collector (4)	30,000	14,070	0.47	C
	Union Street to Front Street	Collector (4)	30,000	16,130	0.54	C
	Front Street to First Avenue	Collector (4)	30,000	20,754	0.69	D
State Street	Ash Street to A Street	Local one-way (3)	10,000	2,190	0.22	A
	B Street to C Street	Local one-way (3)	10,000	3,800	0.38	A
	C Street to Broadway	Local one-way (3)	10,000	3,221	0.32	A
Front Street	Ash Street to A Street	Major one-way (3)	25,000	16,025	0.64	C
	A Street to B Street	Major one-way (3)	25,000	14,532	0.58	C
1 st Avenue	Ash Street to A Street	Major one-way (3)	25,000	19,860	0.79	C
	A Street to B Street	Major one-way (3)	25,000	15,849	0.63	C

Note: Deficient roadway segment operation shown in **bold**.



NOT TO SCALE



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EXISTING CONDITIONS TRAFFIC VOLUMES

EXHIBIT 4

PROPOSED PROJECT

The proposed project will include 71 courtrooms. Of the 71 courtrooms, 59 will relocate from the existing County Courthouse located immediately east of the proposed project site. Ten of the 71 courtrooms will relocate from the Madge Bradley and Family Law Courthouse, which are several blocks northeast of the proposed site. One courtroom will relocate from Kearney Mesa, and the project will add one new courtroom. Sixty of the 71 court rooms will provide for jury trials while the remaining will serve probate, small claims, and family court and will not have a jury call. Only 2 of the 71 courtrooms, the new courtroom and the relocated courtroom from Kearney Mesa, will generate new trips into downtown. The project will provide approximately underground 60 parking spaces on the project site for judges and key staff of the court system. All other project-related parking will occur offsite.

The proposed courthouse site contains approximately 45,000 BGSF of commercial existing office uses and an existing 181 space parking lot. The project will demolish the office space on the proposed site, the existing County Courthouse, and the Old Jail. The removal of the buildings will reduce overall existing traffic in the study area and reduce the existing demand for parking. However, removal of the parking lot (181 spaces) will reduce the existing available public parking capacity.

TRIP GENERATION RATES

The New San Diego Central Courthouse will operate from 8:00 a.m. to 5:00 p.m. Monday through Friday. The majority of the traffic to and from the site will occur during the a.m. peak as most jurors and visitors leave the facility midday or in the early afternoon before the p.m. peak traffic operations begin. Therefore, the traffic analysis in this report focuses only on the a.m. peak period conditions.

Courthouse trip generation rates are not currently published in ITE or City of San Diego Traffic Generation Manuals. Therefore, trip generation rates for the relocated courthouses are based on trip generation studies conducted for the AOC for this project and/or other projects in California.

County Courthouse Trip Generation Rates

In January 2000, the County of San Diego prepared a traffic study for the existing San Diego County Courthouse. In that report, the County supplied employment and trip information for the existing 59 courtroom County Courthouse. Information from that report is based on employee surveys collected in 2000:

Total Court Rooms: 59
 Total Employees: 750
 Total Jurors (per day): 2,100

The research conducted for the County study showed that a total of 2.5 trips per day were made by each employee. In addition, each juror made 2.0 trips per day. The mode split percentages of those trips was:

	Employees	Jurors
Drive Alone:	51%	59%
Transit:	27%	20%
Carpool	13%	5%
Vanpool	3%	4%
Bike/Walk	6%	12%

Of the total trips made to and from the courthouse, there were a total of 1,081 vehicle based employee trips and 2,615 juror vehicle trips per day. This equates to 18.32 employee and 44.32 juror trips per day per court room. Employees and most jurors/visitors arrive at the courthouse during the a.m. peak period (7:30 to 9:00 a.m.). Therefore, 50 percent of the total trips arrive during the a.m. peak. Table 6 summarizes the trip generation rates developed for the County Court building.

Table 6: Trip Generation Rates – County Court Building

Land Use	Daily	AM		
		Total	In	Out
Employees (trips per court room)	18.32	9.16	8.24	0.92
Visitor/Juror (trips per court room)	44.32	22.16	19.94	2.22

Family and Probate Court Trip Generation Rates

The proposed project will include the existing 59 court rooms in the County Courthouse along with ten relocated courtrooms from the Family Law (1555 Sixth Avenue) and Madge Bradley (1409 Fourth Avenue) buildings in downtown San Diego. Neither Family Court or Probate Court will require jury calls. Therefore the trip generation for these courts includes only the employees and individuals involved in such court cases.

In January 2010, the AOC commissioned a traffic study¹ for a Family Resources courthouse in San Jose, California. The study showed that all employees and most visitors arrived at the courthouse between 8:00 and 9:00 a.m. Results of the trip end

¹ Available at http://www.courtinfo.ca.gov/programs/occm/documents/santa_clara_final_mnd.pdf

survey conducted for a Family Court in San Jose, California (20 court rooms) indicated in Table 7.

**Table 7: Trip Generation – Family and Probate Court
(No Jury Calls)**

Land Use	Daily	AM		
		Total	In	Out
Employees (trips per court room)	23.1	11.56	10.4	1.16
Visitors (trips per court room)	49.0	24.50	22.05	2.45

FORECAST OF NET PROJECT TRIP GENERATION

Since the existing operations of the 59-courtroom County Courthouse are only moving one block west and are essentially unchanged, the project's net trip generation includes three components: 1. New trips generated by the AOC's addition of one new courtroom and the relocation of Kearny Mesa courtroom to the new courthouse; 2. Trips associated with the relocation of the existing Madge Bradley and Family Court courtrooms within downtown; and 3. Elimination of existing trips due to demolition of the buildings on the proposed courthouse site, demolition of the County Courthouse (which forces relocation of the County's staff that work in the building), and demolition of the Old Jail

1. New Downtown San Diego Courtrooms

Only trips associated with the relocation from Kearney Mesa and the one new proposed courtroom will generate new trips into downtown San Diego. Overall, the project will generate 134 new vehicle-based trips within the study area when trip generation rates for courthouse facilities are applied to the two new courtrooms that will be in downtown San Diego. There will be 68 a.m. peak hour trips. Table 8 shows trip generation rates developed for this project.

**Table 8: Forecast Trips Generated by New Courtrooms
and Courtrooms Relocated from Outside Downtown San Diego**

Land Use	Daily	AM		
		Total	In	Out
TRIP GENERATION RATES				
General Court (jury)				
Employees <i>(trips per court room)</i>	18.32	9.16	8.24	0.92
Visitors & jurors <i>(trips per court room)</i>	44.32	22.16	19.94	2.22
NEW TRIPS ASSIGNED TO STUDY AREA				
General Court (jury): 1 new courtroom				
Employees	18	9	8	1
Visitors & Jury	44	22	20	2
Family & Probate Court (non jury): 1 courtroom relocated from Kearney Mesa				
Employees	23	12	10	2
Visitors	49	25	22	3
<i>New Trips Generated in Downtown San Diego</i>	134	68	60	8

2. Madge Bradley and Family Law Court Relocation to New San Diego Central Courthouse

The project will relocate 10 courtrooms from the Madge Bradley and Family Law Court buildings that currently reside in downtown San Diego on Fourth and Sixth Avenues. Exhibit 5 illustrates the location of the existing buildings and the proposed court house. The trips associated with the relocation of the existing courtrooms within downtown are not new trips to downtown San Diego. As summarized in Table 9, these two courtrooms currently generate approximately 361 vehicle based trips during the a.m. peak period. The travel patterns into and around downtown for these relocated courtrooms are likely to shift due to the relocation of the judicial operations and their associated parking demand. The change in traffic patterns associated with the relocation of the Madge Bradley and Family Law courtrooms trips is included in the analysis of Existing plus Project conditions.

Table 9: Existing Trips to be Redistributed

Land Use	Daily	AM		
		Total	In	Out
TRIP GENERATION RATES – Family & Probate (Non-Jury) ⁽¹⁾				
Employees <i>(trips per court room)</i>	23.1	11.56	10.4	1.16
Visitors <i>(trips per court room)</i>	49.0	24.50	22.05	2.45
FORECAST RESTRIBUTED TRIPS – Family & Probate (Non-Jury)				
Employees <i>(10 court rooms)</i>	231	116	104	12
Visitors <i>(10 court rooms)</i>	490	245	221	24
<i>Existing Trips Redistributed in Downtown San Diego</i>	721	361	325	36

(1) Source: Trip generation reported for County of San Diego Courthouse & San Jose Family Resources Courthouse

3. Removal of Existing Land Uses From Proposed Project Site, County Courthouse, and Old Jail

The preferred courthouse site includes an approximately 45,000 square foot set of buildings. There are two buildings with four stories each and a single story-building that is between the two larger buildings. The buildings provide office space for legal, bail bond, and restricted income legal support. To estimate the number of trips currently on the roadway network from these buildings, trip generation rates were applied to the existing square footage based on City of San Diego Office Building Trip Generation Rates.

The County shares space in the County Courthouse with the Superior Court. The County's Child Support Services and Health and Human Services occupy approximately 56,000 square feet of space in the building. After completion of the new courthouse, the County's Child Support Services, and Health and Human Services staff will vacate the County Courthouse. It is anticipated that these trips will leave downtown San Diego and were therefore removed from the study area.

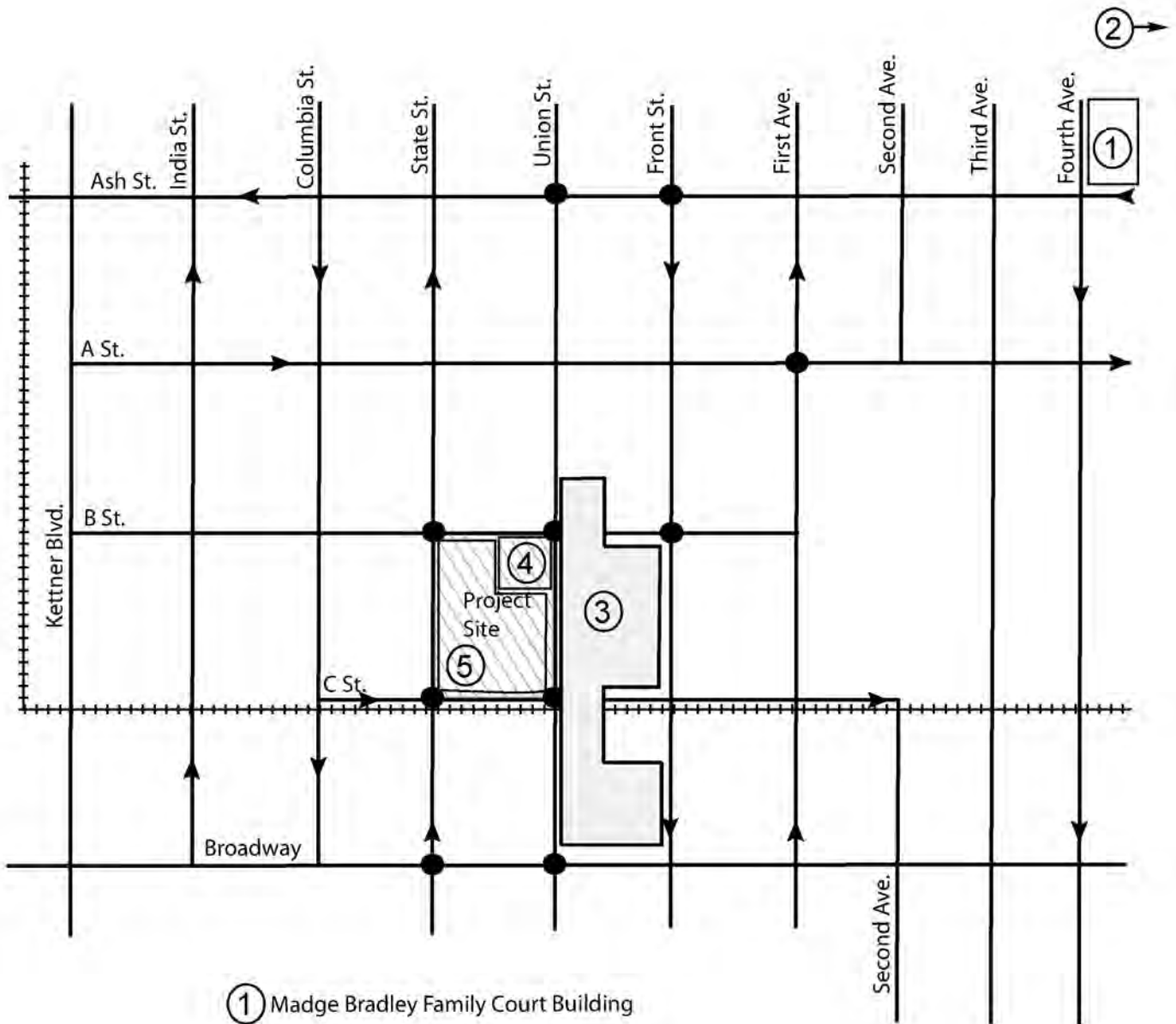
The County also leases the Old Jail from the AOC, and the County sub-leases the Old Jail to a private party that operates the detention facility. With the demolition of the Old Jail, trips associated with that use will also be removed from the study area. There are approximately 65 employees at the facility that report in on a daily basis. Therefore, 65 a.m. peak period trips were removed from the roadway network for this analysis of project related impacts.

The proposed project will remove the existing buildings from the proposed courthouse site, the County Courthouse, the Old Jail, and the existing 181 space public parking lot. The removal of the courthouse site's buildings, the County's space in the County Courthouse, and the Old Jail will reduce traffic volume within the study area by approximately 2,142 trips per day with a reduction of 326 a.m. peak period trips. Table 10 summarizes the reduction in traffic associated with the removal of the existing buildings.

Table 10: Existing Trips Associated with Removal of Uses within the Study Area



Land Use	Daily	AM		
		Total	In	Out
TRIP GENERATION RATES				
Commercial Office Building <i>(Trips per 1,000 sf)</i>	Ln(T) = 0.756 Ln(x) + 3.95	13%	90%	10%
Jail	2 trips per day per employee	50%	90%	10%
EXISTING ESTIMATED TRIPS TO REMAIN				
Commercial Office Building ⁽¹⁾ <i>(removal of 45,000 sf)</i>	-923	-120	-108	-12
San Diego County Office Use within Existing Courthouse <i>(removal of 56,000 sf)</i>	-1,089	-141	-127	-13
Old Jail <i>(removal of 65 staff per day)</i>	-130	-65	-58	-7
TOTAL REMOVED TRIPS	-2,142	-326	-293	-33

(1) **Source:** City of San Diego Trip Generation Rates (2003) The daily trip generation rate is based on the equation provided in the City's Traffic Generation Manual. The number of trips (T) is a function of (x), which is number of units. In this case, the number of units is expressed in 1,000 sf.



- ① Madge Bradley Family Court Building
- ② Family Law Courthouse Building
- ③ Existing County Courthouse Building
- ④ Existing Bail Bond Building
- ⑤ Pay to Park Lot (181 spaces)

LEGEND:

-  Project Site
-  Courthouse to be relocated



NOT TO SCALE



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BUILDING LOCATIONS

EXHIBIT 5

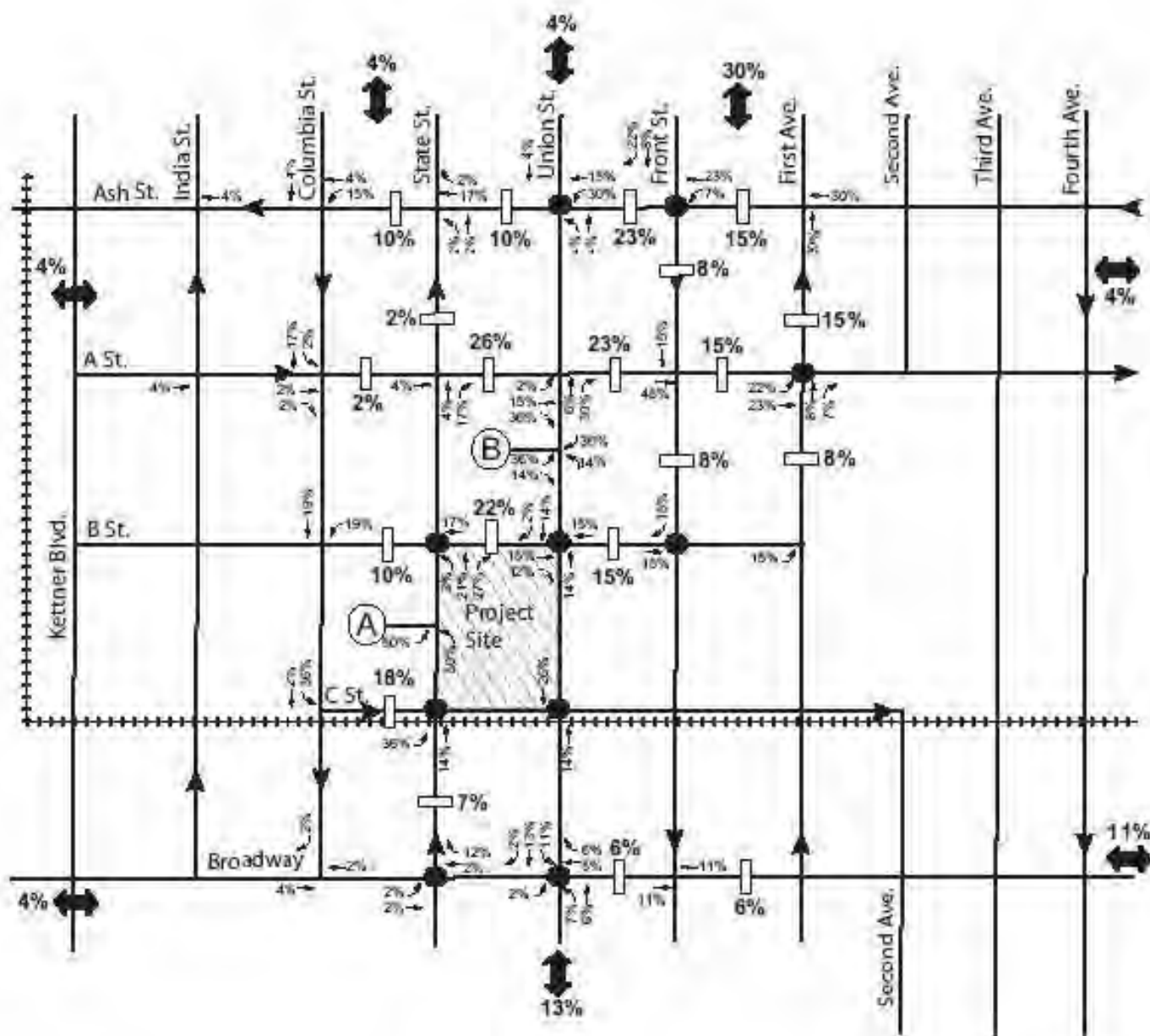
DISTRIBUTION OF NEW PROJECT TRIPS

Exhibit 6 shows distribution percentages used in this evaluation. The distribution percentages were applied to the new trips generated by the site and the reassignment of existing downtown trips associated with the Madge Bradley & Family Law Courthouses. The trip distribution accounts for limited, restricted parking will be provided onsite and all other vehicles parking in public parking facilities near the courthouse. Although multiple public parking facilities are available within three blocks of the site, the distribution of traffic assumes drivers are primarily use two parking lots closest to the building. This provides for an increased concentration in trips near the courthouse and may represent the circulation of traffic that occurs when drivers search for available public parking spaces.

TRIP ASSIGNMENT

The new or reassigned project volumes associated with the new courthouse are illustrated in Exhibit 7. Exhibits 8 through 11 illustrate the individual distribution or redistribution of trips associated with each of the components of the project that make up the total trip assignment:

- New Trips to Downtown (relocation of one courtroom from Kearney Mesa & one new court room trip assignment) - Exhibit 8;
- Redistribution of Madge Bradley and Family Law Courtrooms – Exhibit 9;
- Removal of Existing Madge Bradley and Family Law Courtroom Trips – Exhibit 10; and
- Removal of Existing Trips Associated with the Old Jail, Existing Buildings on Proposed Site and Existing San Diego County Office Space within Existing Courthouse – Exhibit 11



LEGEND:

- xx% ↗ Percent Peak Hour Trips
- xx% □ Percent Daily Trips
- (A) Parking Lot
- (B) Parking Lot



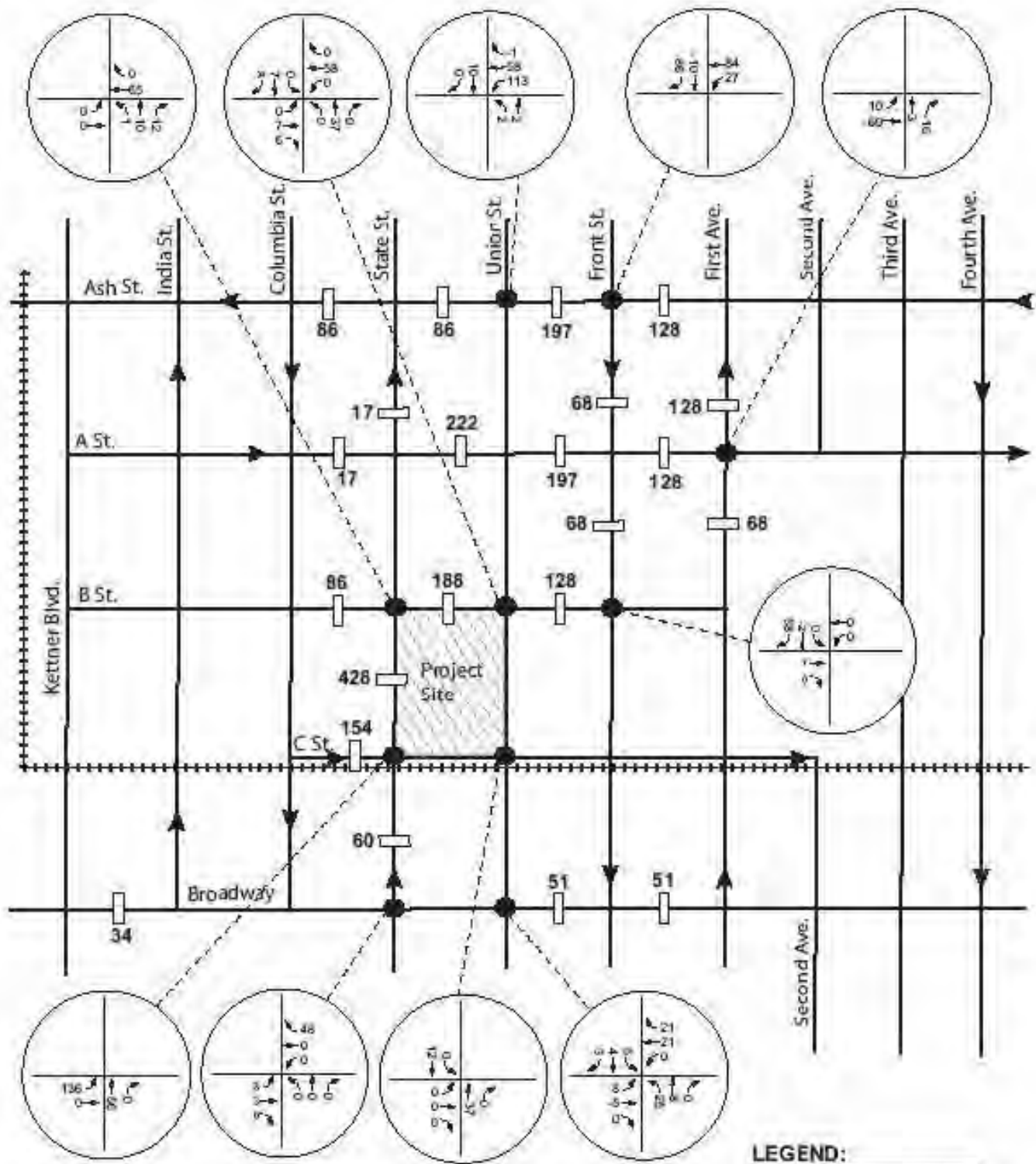
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TRIP DISTRIBUTION PERCENTAGES

EXHIBIT 6



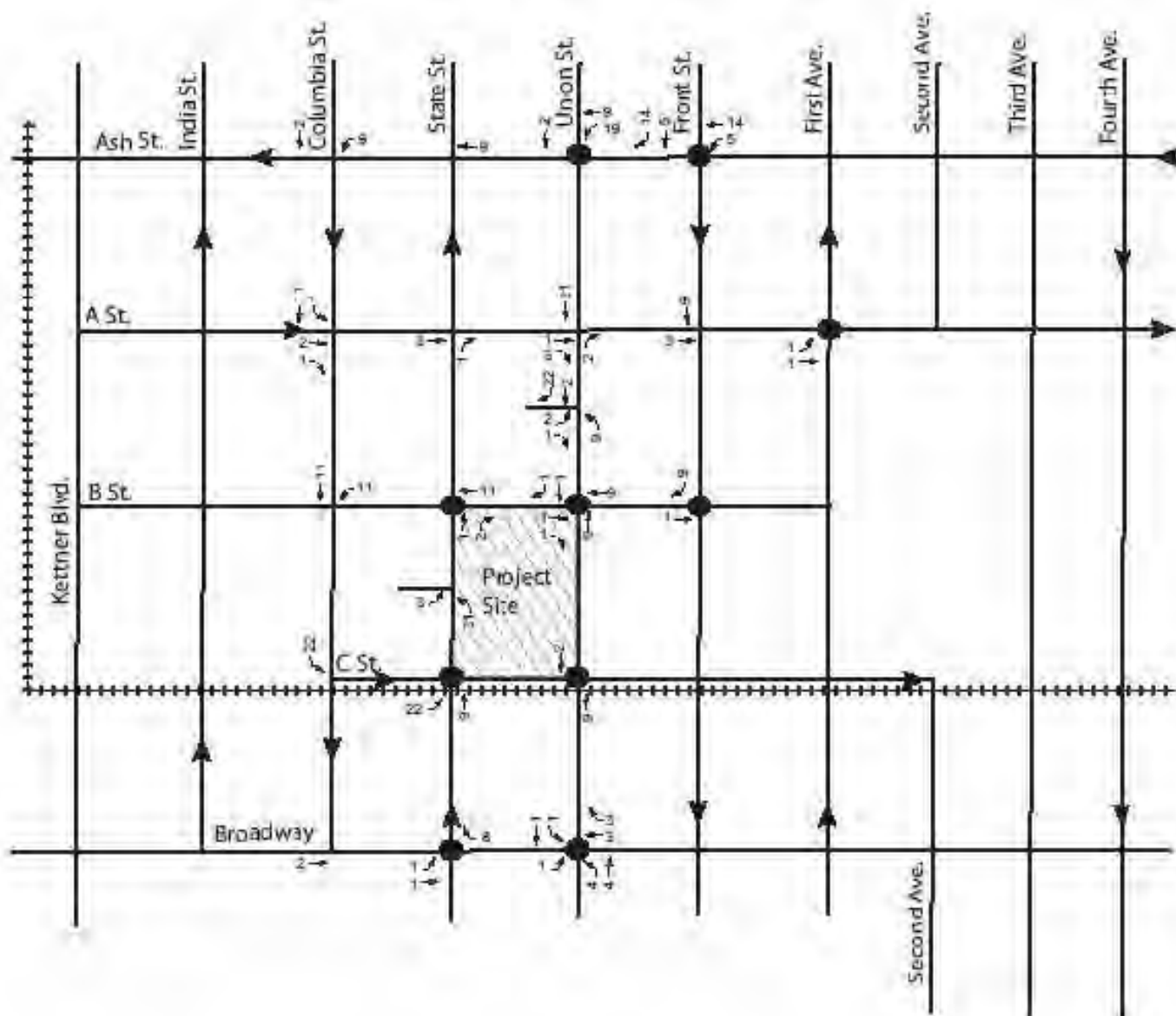
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PROJECT TRIP ASSIGNMENT

EXHIBIT 7



LEGEND:

xx Number Peak Hour Trips



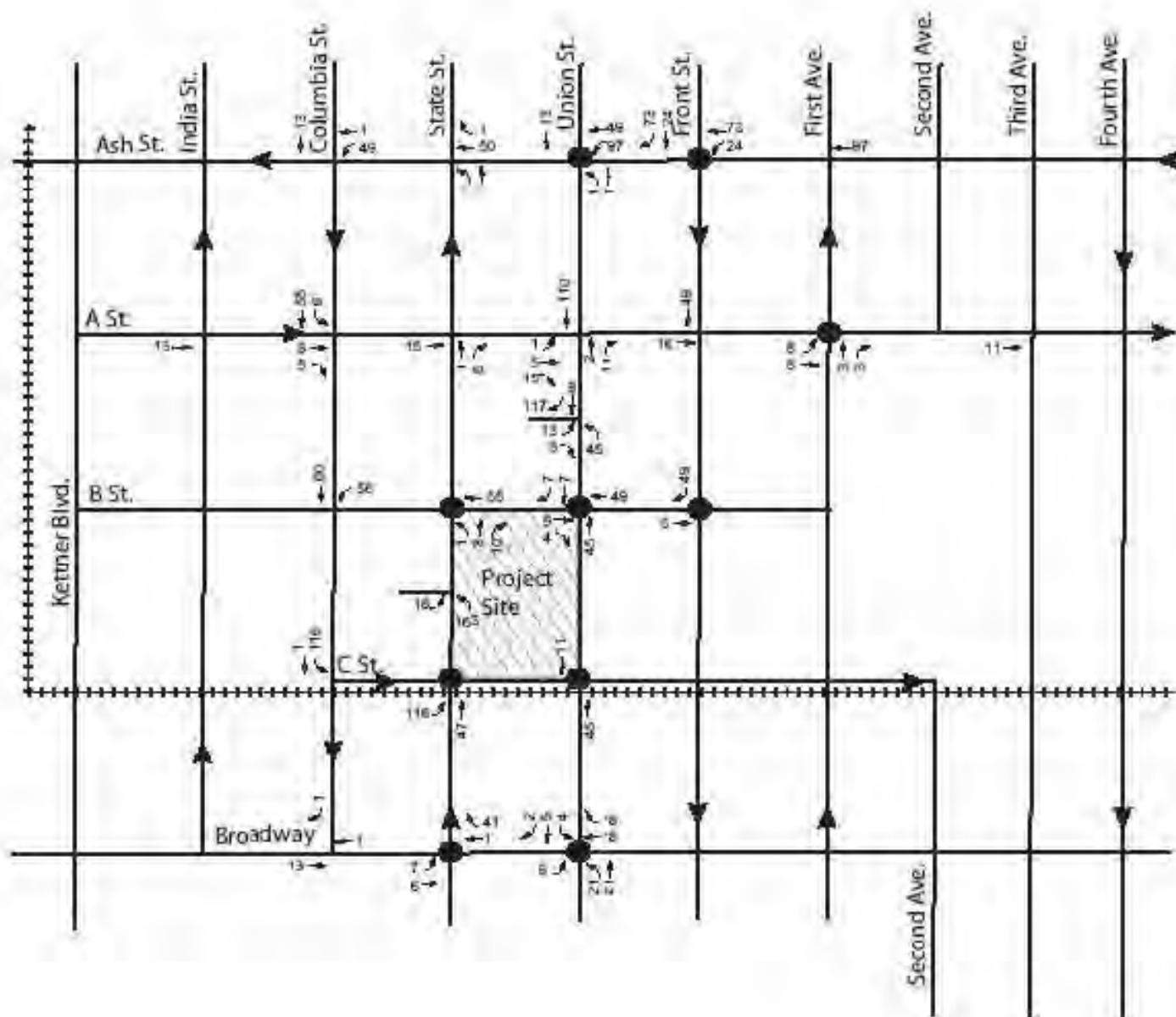
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NEW TRIP ASSIGNMENT

EXHIBIT 8



LEGEND:

xx: ↗ Number Peak Hour Trips



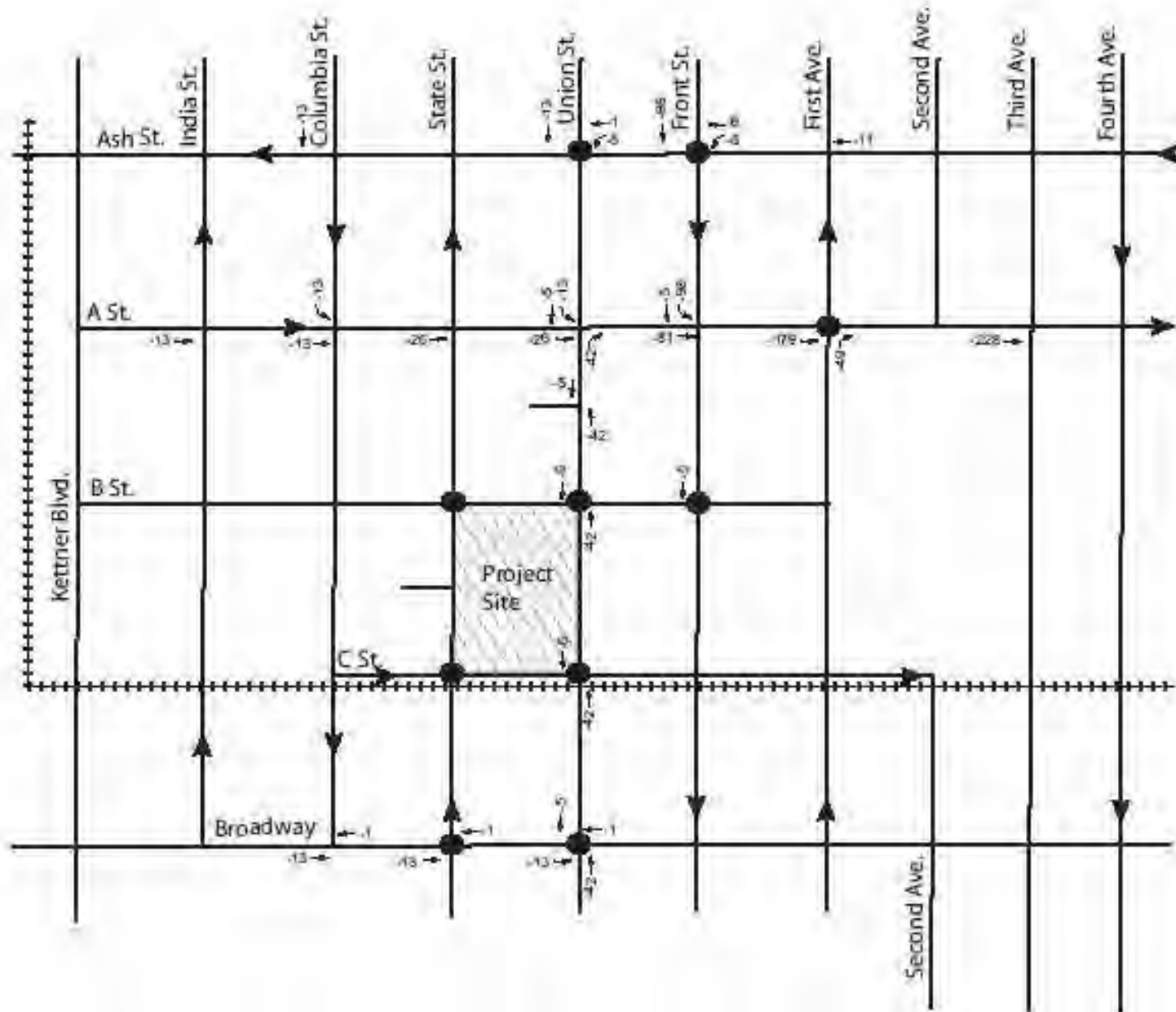
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REDISTRIBUTED MADGE BRADLEY AND FAMILY LAW TRIPS

EXHIBIT 9



LEGEND:

XX / Number Peak Hour Trips



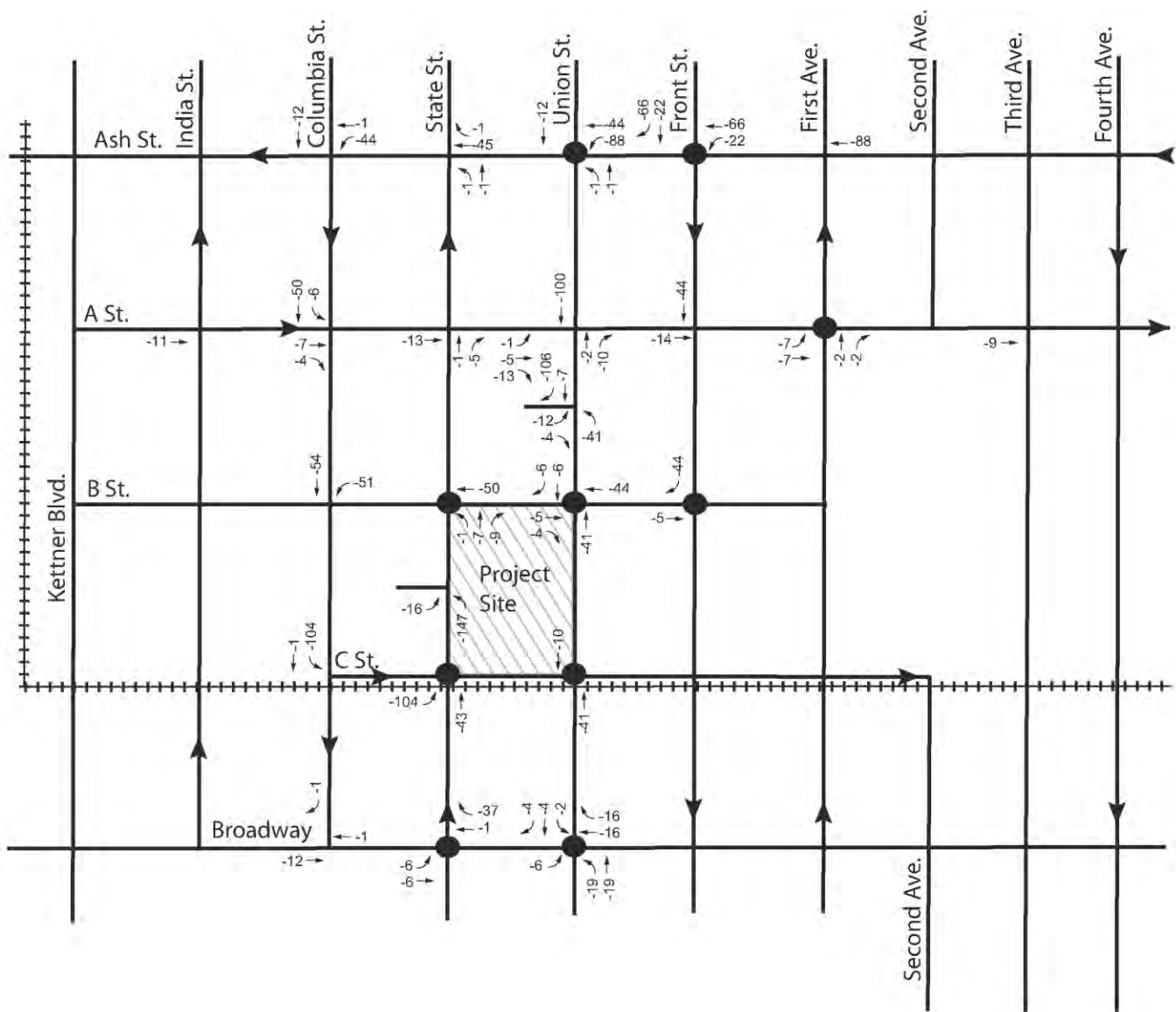
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25-104231.001 May 2010

REMOVAL OF MADGE BRADLEY AND FAMILY LAW TRIPS

EXHIBIT 10



LEGEND:

xx ↗ Number Peak Hour Trips



NOT TO SCALE



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REMOVAL OF OLD JAIL, SD COUNTY COURT USES WITHIN EXISTING COURTHOUSE AND EXISTING OFFICE BUILDINGS ON PROPOSED SITE

EXHIBIT 11

EXISTING PLUS PROJECT CONDITIONS

Overlaying the trips identified in Exhibit 7 with the existing conditions traffic volumes provided the forecast a.m. peak traffic volumes with the proposed project. The Existing plus Project traffic volumes are illustrated in Exhibit 12.

The Existing plus Project traffic volumes were evaluated using existing conditions intersection geometry and traffic control. Tables 11 and 12 display results of the Highway Capacity Manual intersection operating conditions levels of service and roadway segment level of service analysis. As shown in Tables 11 and 12, all intersections and roadway segments are forecast to operate at an acceptable level of service. Detailed LOS worksheets are in Appendix C.

Table 11: Existing Plus Project Conditions Intersection LOS – AM Peak

Study Intersection	Control	Existing No Project		Existing Plus Project		Change in AM Peak Hour Delay
		Delay - LOS		Delay - LOS		
Ash Street / Union Street	S	6.2	A	5.8	A	-0.4
Ash Street / Front Street	S	19.9	B	19.6	B	-0.3
First Avenue / A Street	S	17.2	B	18.2	B	1.0
B Street / State Street	U	9.3	A	9.4	A	0.1
B Street / Union Street	U	10.3	B	10.3	B	0.0
B Street / Front Street	S	6.1	A	6.1	A	0.0
C Street / State Street	U	10.9	B	12.1	B	1.2
C Street / Union Street	U	10.5	B	10.4	B	-0.1
Broadway / State Street	S	0.0	A	0.0	A	0.0
Broadway / Union Street	S	8.5	A	8.7	A	0.2

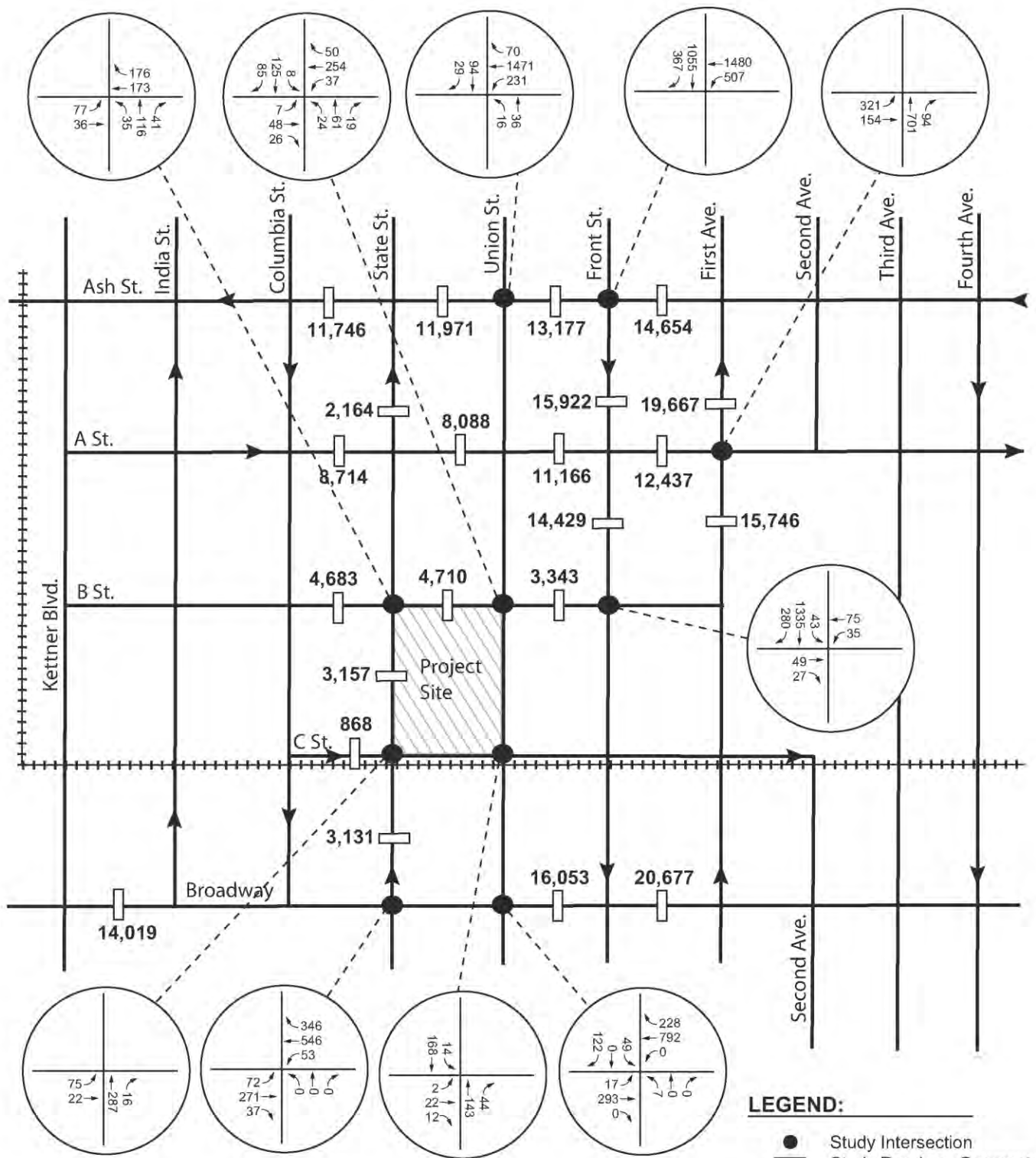
Note: Deficient intersection operation shown in **bold**;

Control: S= signalized , U= unsignalized

Table 12: Existing Plus Project Roadway ADT Volumes and LOS

Roadway	Location	Class (# Lanes)	LOS E Capacity	Existing V/C	Existing Plus Project			Change in V/C
					ADT	V/C	LOS	
Ash Street	Columbia Street to State St.	Major one-way (3)	25,000	0.47	11,746	0.47	B	0.00
	State Street to Union Street	Major one-way (3)	25,000	0.48	11,971	0.48	B	0.01
	Union Street to Front Street	Major one-way (3)	25,000	0.54	13,177	0.53	B	-0.01
	Front Street to First Avenue	Major one-way (3)	25,000	0.59	14,654	0.59	C	0.01
A Street	Columbia Street to State St.	Major one-way (3)	25,000	0.35	8,714	0.35	A	0.00
	State Street to Union Street	Major one-way (3)	25,000	0.34	8,088	0.32	A	-0.02
	Union Street to Front Street	Major one-way (3)	25,000	0.46	11,166	0.45	B	-0.01
	Front Street to First Avenue	Major one-way (3)	25,000	0.51	12,437	0.50	B	-0.01
B Street	Columbia Street to State St.	Local (2)	8,000	0.60	4,683	0.59	C	-0.01
	State Street to Union Street	Local (2)	8,000	0.62	4,710	0.59	C	-0.03
	Union Street to Front Street	Local (2)	8,000	0.44	3,343	0.42	B	-0.02
C Street	Columbia Street to State St.	Local one-way (2)	8,000	0.14	868	0.11	A	-0.03
Broadway	Kettner Blvd. to India Street	Collector (4)	30,000	0.47	14,019	0.47	C	0.00
	Union Street to Front Street	Collector (4)	30,000	0.54	16,053	0.54	C	0.00
	Front Street to First Avenue	Collector (4)	30,000	0.69	20,677	0.69	D	0.00
State Street	Ash Street to A Street	Local one-way (3)	10,000	0.22	2,164	0.22	A	0.00
	B Street to C Street	Local one-way (3)	10,000	0.38	3,157	0.32	A	-0.06
	C Street to Broadway	Local one-way (3)	10,000	0.32	3,131	0.31	A	-0.01
Front Street	Ash Street to A Street	Major one-way (3)	25,000	0.64	15,922	0.64	C	0.00
	A Street to B Street	Major one-way (3)	25,000	0.58	14,429	0.58	C	0.00
1 st Avenue	Ash Street to A Street	Major one-way (3)	25,000	0.79	19,667	0.79	C	0.00
	A Street to B Street	Major one-way (3)	25,000	0.63	15,746	0.63	C	0.00

Note: Deficient roadway segment operation shown in **bold**.



LEGEND:

- Study Intersection
- ▭ Study Roadway Segment
- xx AM Peak Hour Volume
- X,XXX Average Daily Traffic



NOT TO SCALE



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EXISTING PLUS PROJECT CONDITIONS

EXHIBIT 12

CUMULATIVE PROJECTS

Cumulative conditions evaluate the traffic operations at project opening year. To complete this analysis, a list of projects that are approved or are pending approval and are anticipated to be occupied by project opening Year 2016 according to CCDC's Downtown Community Plan. After discussing the project's with CCDC's Staff, it was determined that the development of many of the projects were uncertain, but were accounted for in the recent update in the Downtown Community Plan long range forecast (year 2030). Therefore, the year 2016 traffic volumes were determined using an annualized growth rate factor. An annual growth rate factor of approximately two percent (2%) per year was calculated based on the forecast change in volume from 2010 (existing conditions) to 2030 (buildout of future project in downtown San Diego). Cumulative a.m. peak hour and ADT volumes through year 2016 are presented in Exhibit 13.

Reuse of Madge Bradley Courthouse and Family Law Courthouse as Office Space

The removal of the Madge Bradley and Family Law Courtrooms from its existing site will create an opening for re-use of the vacated office space use. This scenario will create additional trips on the roadway network. Table 13 summarizes the comparison of the existing court room use and the proposed office use. As shown in Table 13, the conversion from courtroom to office building will generate fewer a.m. peak hour trips and a greater number of p.m. peak hour trips when compared to the existing use.

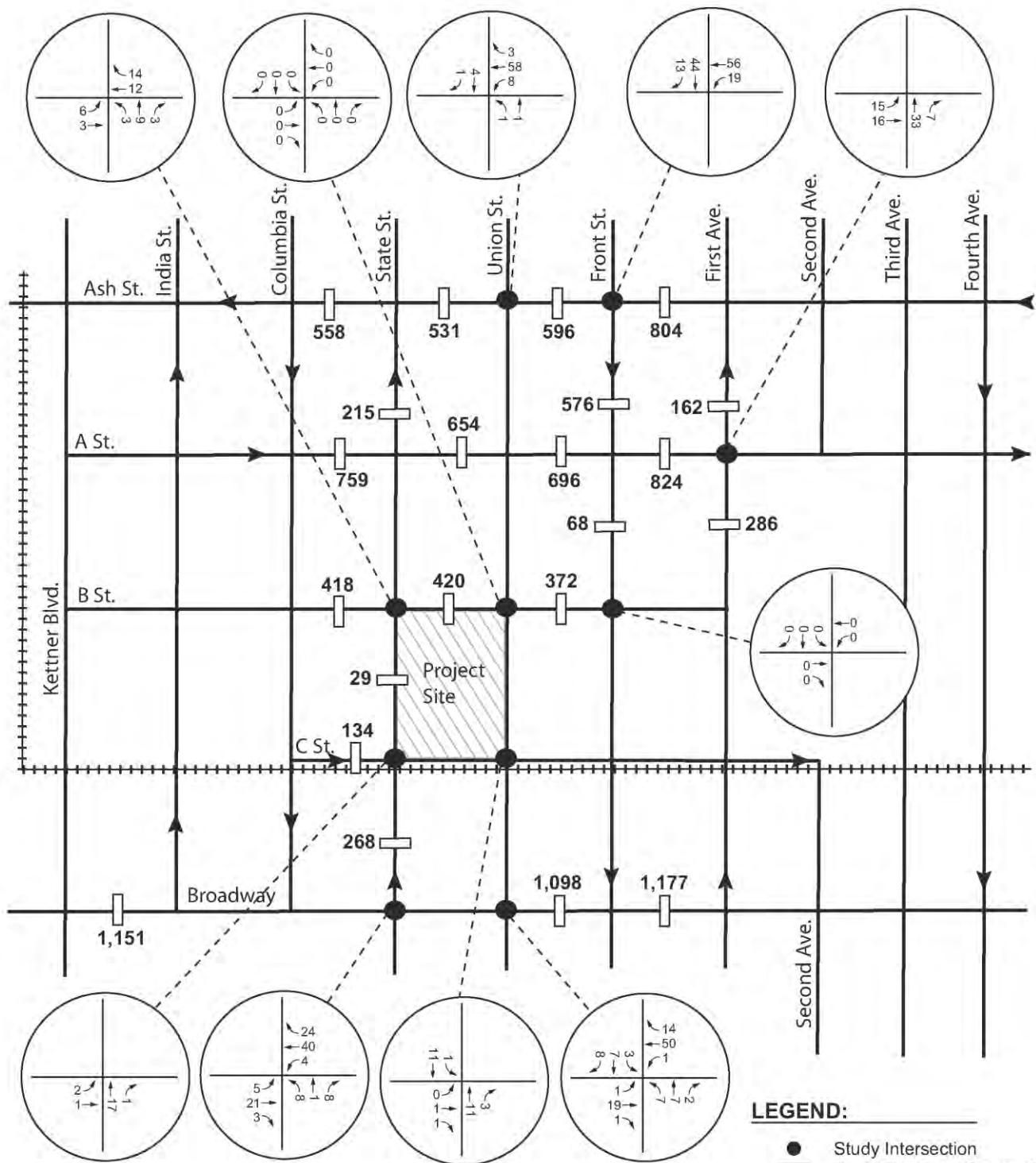
New trips associated with the reuse of the Madge Bradley and Family Law Courtrooms as an office is shown in Exhibit 14. The 1,685 trips per day associated with the conversion of the Madge Bradley Courthouse and Family Law Courthouse to office space is accounted for in the Existing plus Cumulative plus Project Conditions.

**Table 13: Comparison of Court Room Trip Generation
with Office Space Trip Generation
Madge & Family Court Room Relocation**

Land Use	Daily	AM			PM		
		Total	In	Out	Total	In	Out
Trip Generation Rates ⁽¹⁾							
Office Building ⁽¹⁾ <i>(trips per 1,000 sf)</i>	Ln(T) = 0.756 Ln(x) + 3.95	13%	90%	10%	14%	20%	80%
Forecast New Office Related Trips ⁽²⁾							
Office Space <i>100,000 sf Office Space</i>	1,685 trips per day	219	197	22	236	47	189
Net Change in Trips	+964 trips per day	-142	-128	-14	+236	+47	+189

(1) Source: City of San Diego Trip Generation Rates (2003)

(2) Source: Trip generation reported for County of San Diego Courthouse & San Jose Family Resources



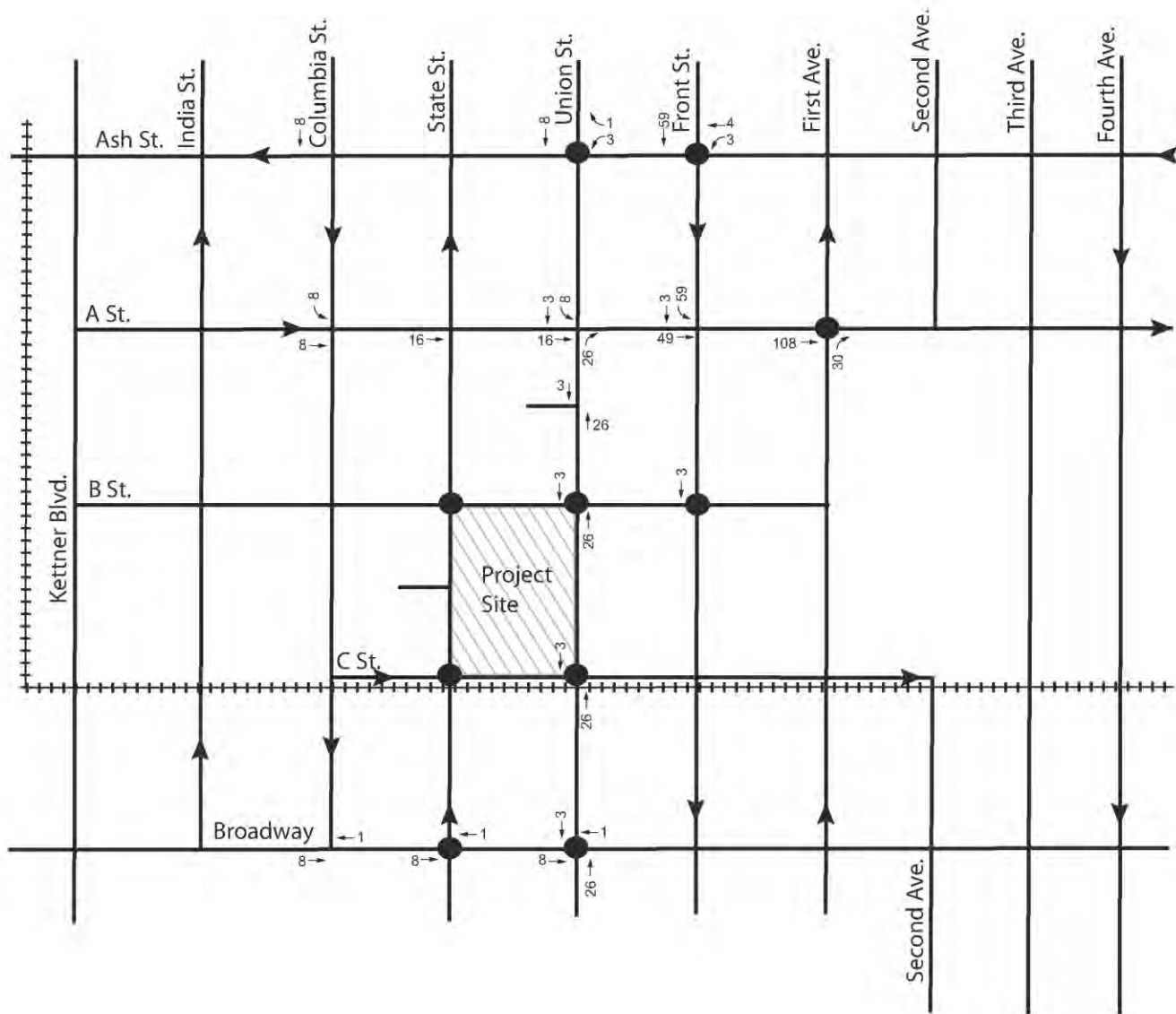
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CUMULATIVE PROJECT TRIPS

EXHIBIT 13



LEGEND:

xx ↗ Number Peak Hour Trips



NOT TO SCALE



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TRIPS ASSOCIATED WITH REUSE OF MADGE BRADLEY AND FAMILY LAW AS OFFICE

EXHIBIT 14

CUMULATIVE CONDITIONS

To establish the baseline Year 2016 conditions, the growth rate factor was applied to the existing traffic volumes. Exhibit 15 displays existing plus Cumulative a.m. peak hour and average daily traffic volumes. Using these volumes and existing intersection geometry and traffic control, Year 2016 baseline conditions were evaluated. Tables 14 and 15 show the results of the intersection and roadway segment operational analysis, respectively.

Project traffic was then added to the baseline 2016 volumes to evaluate the impacts in the project opening year. Existing Plus Cumulative Plus Project conditions are illustrated in Exhibit 16. As shown in Tables 14 and 15, all intersections and roadway segments are forecast to operate at an acceptable level of service by Year 2016. Cumulative conditions level of service worksheets are provided in Appendix E.

**Table 14: Cumulative Conditions
Intersection LOS AM Peak Hour**

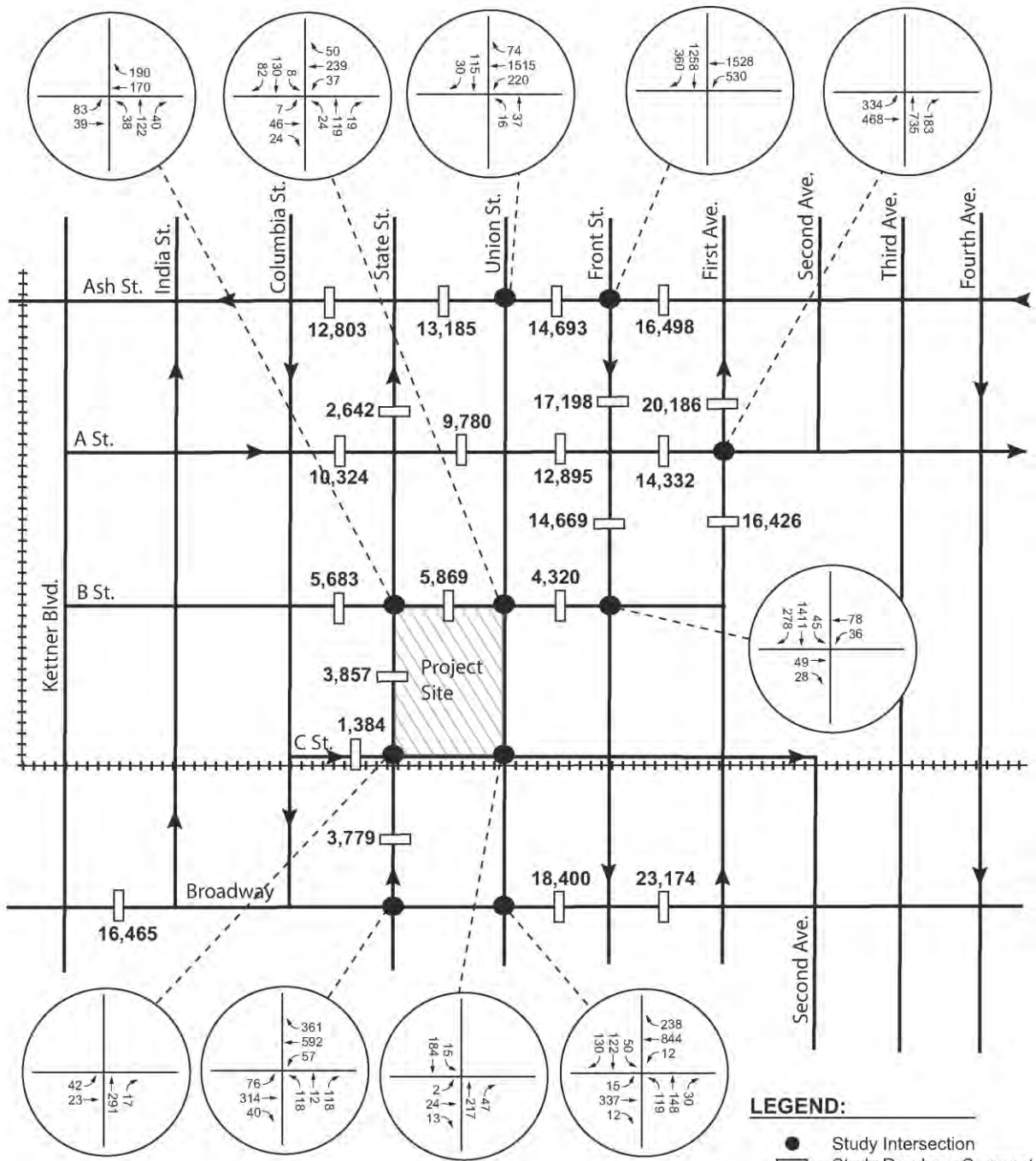
Study Intersection	Control	No Project		With Project		Change in Delay
		AM Peak Hour Delay - LOS		AM Peak Hour Delay - LOS		AM Peak Hour
Ash Street / Union Street	S	6.3	A	6.6	A	0.3
Ash Street / Front Street	S	20.4	C	20.6	C	0.2
First Avenue / A Street	S	17.3	B	17.1	B	-0.2
B Street / State Street	U	9.6	A	9.6	A	0.0
B Street / Union Street	U	10.3	B	10.5	B	0.2
B Street / Front Street	S	6.2	A	6.2	A	0.0
C Street / State Street	U	11.1	B	11.1	B	0.0
C Street / Union Street	U	10.6	B	10.7	B	0.1
Broadway / State Street	S	11.6	B	11.6	B	0.0
Broadway / Union Street	S	15.8	B	16.3	B	0.5

Note: Deficient intersection operation shown in **bold** Control: S= signalized , U= unsignalized

**Table 15: Cumulative Conditions
Roadway ADT Volumes and LOS**

Roadway	Location	Class (# Lanes)	LOS E Capacity	Existing Plus Cumulative ADT	Existing Plus Cumulative Plus Project			Change in V/C
					ADT	V/C	LOS	
Ash Street	Columbia Street to State St.	Major one-way (3)	25,000	12,803	12,674	0.51	B	-0.01
	State Street to Union Street	Major one-way (3)	25,000	13,185	13,056	0.52	B	-0.01
	Union Street to Front Street	Major one-way (3)	25,000	14,693	14,397	0.58	C	-0.01
	Front Street to First Avenue	Major one-way (3)	25,000	16,498	16,304	0.65	C	-0.01
A Street	Columbia Street to State St.	Major one-way (3)	25,000	10,324	10,298	0.41	B	0.00
	State Street to Union Street	Major one-way (3)	25,000	9,780	9,446	0.38	A	-0.01
	Union Street to Front Street	Major one-way (3)	25,000	12,895	12,599	0.50	B	-0.01
	Front Street to First Avenue	Major one-way (3)	25,000	14,332	14,139	0.57	C	-0.01
B Street	Columbia Street to State St.	Local (2)	8,000	5,683	5,555	0.69	D	-0.02
	State Street to Union Street	Local (2)	8,000	5,869	5,586	0.70	D	-0.04
	Union Street to Front Street	Local (2)	8,000	4,320	4,127	0.52	C	-0.02
C Street	Columbia Street to State St.	Local one-way (2)	8,000	1,384	1,152	0.14	A	-0.03
Broadway	Kettner Blvd. to India Street	Collector (4)	30,000	16,465	16,414	0.55	C	0.00
	Union Street to Front Street	Collector (4)	30,000	18,400	18,323	0.61	C	0.00
	Front Street to First Avenue	Collector (4)	30,000	23,174	23,097	0.77	D	0.00
State Street	Ash Street to A Street	Local one-way (3)	10,000	2,642	2,616	0.26	A	0.00
	B Street to C Street	Local one-way (3)	10,000	3,857	3,214	0.32	A	-0.06
	C Street to Broadway	Local one-way (3)	10,000	3,779	3,689	0.37	A	-0.01
Front Street	Ash Street to A Street	Major one-way (3)	25,000	17,198	17,095	0.68	C	0.00
	A Street to B Street	Major one-way (3)	25,000	14,669	14,566	0.58	C	0.00
1 st Avenue	Ash Street to A Street	Major one-way (3)	25,000	20,186	19,993	0.80	C	-0.01
	A Street to B Street	Major one-way (3)	25,000	16,426	16,323	0.65	D	0.00

Note: Deficient roadway segment operation shown in **bold**.



- LEGEND:**
- Study Intersection
 - ▭ Study Roadway Segment
 - xx AM Peak Hour Volume
 - X,XXX Average Daily Traffic

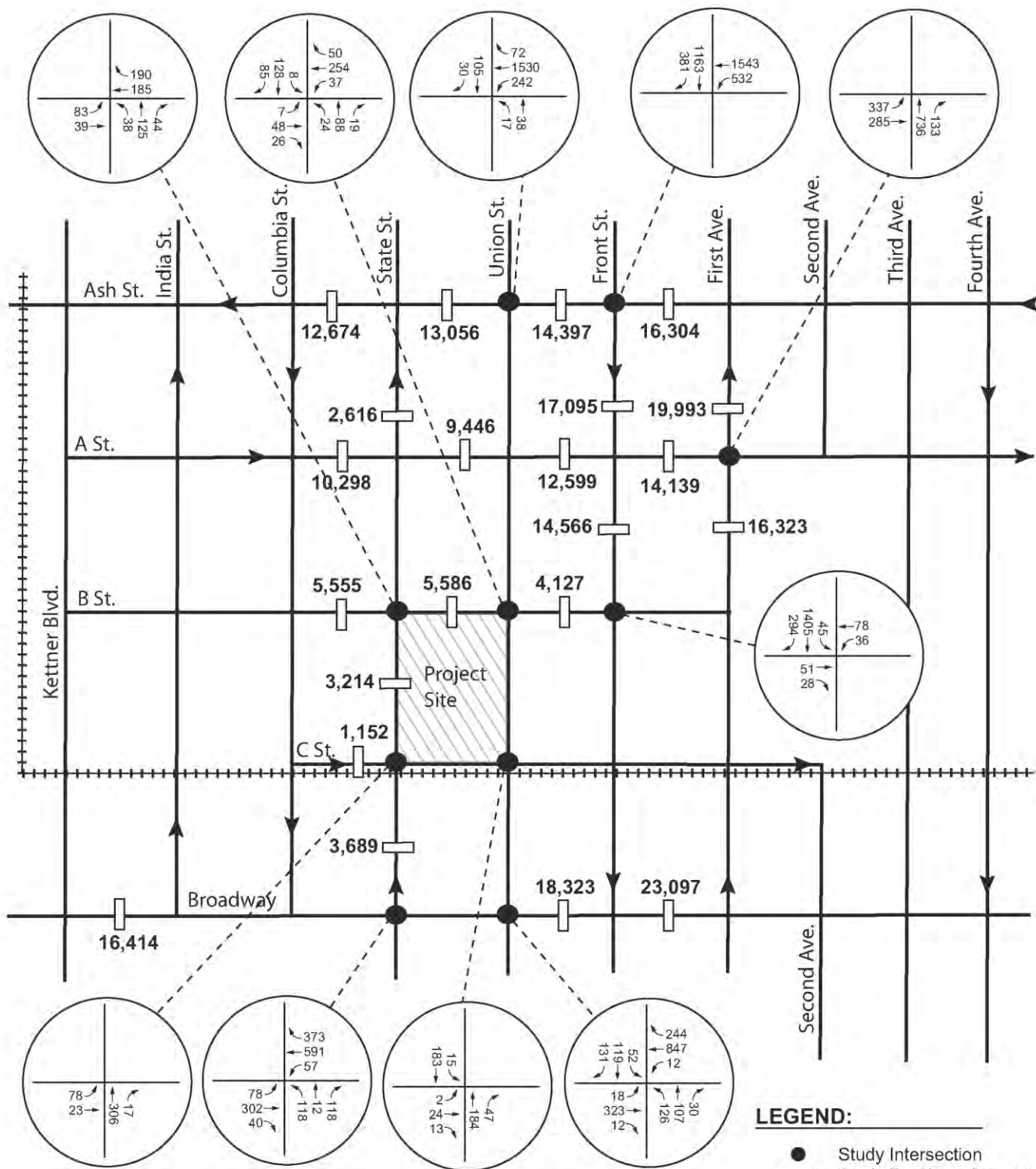
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EXISTING PLUS CUMULATIVE CONDITIONS

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EXHIBIT 15



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EXISTING PLUS CUMULATIVE PLUS PROJECT CONDITIONS

EXHIBIT 16

PARKING

The Superior Court will vacate use of 66 parking spaces on the County-owned block between State Street, A Street, Union Street, and B Street and one space in the County Courthouse, and the new courthouse will provide approximately 110 secured underground parking spaces for judges and court staff. The new courthouse's parking capacity eliminates part of the parking demand associated with the Superior Court's consolidation of its Madge Bradley and Family Law operations, the Kearney Mesa courtroom, and the new courtroom.

To determine the existing available parking around the project, an inventory of available public parking near the proposed courthouse site was conducted. The inventory revealed that there are more than 2,620 public parking spaces within a three block radius of the proposed project site. The parking spaces are in surface parking lots (874 spaces) and public parking structures (1,746 spaces).

Although the parking lots are currently shared by other uses downtown, a survey of the 15 surface parking lots in closest proximity to the project site demonstrates that the existing parking lots are not fully occupied and sufficient parking is available to serve the proposed project.

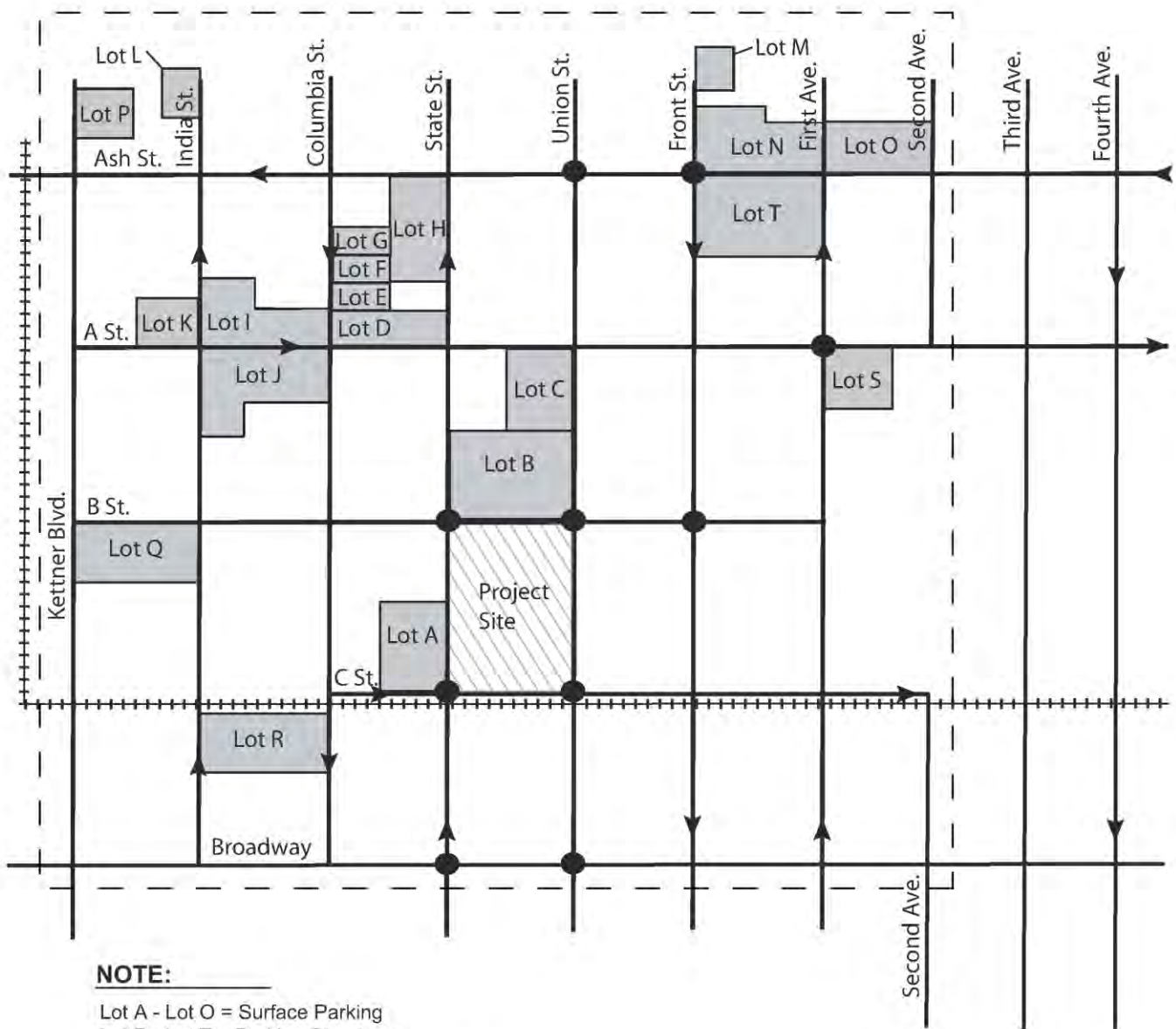
Table 16 summarizes the results of a survey of existing available parking in surface parking lots within three blocks of the project site. The survey was conducted from 7:30 to 9:30 a.m. on March 24, 2010 specifically for this project. As shown in Table 16, the 15 surface parking lots inventoried account for 874 parking spaces. Exhibit 16 illustrates the location of the surface parking lots surveyed for this project. The proposed courthouse site currently provides 181 parking spaces.

Most courts require that jurors and staff report prior to 9:00 a.m. At 8:30 a.m., when a large portion of trips would arrive to the courts, approximately 395 spaces were observed to be unoccupied (45%).

**Table 16: Occupancy Survey - Surface Parking Lots
in Immediate Vicinity of Project Site**

Parking Lot	Total Spaces	Observed Unoccupied Spaces					% Available at 8:30 AM
		7:30 AM	8:00 AM	8:30 AM	9:00 AM	9:30 AM	
A	61	7	8	1	6	3	1.6%
B	163	111	85	77	60	53	47.2%
C	49	42	32	28	23	18	57.1%
D	45	22	17	6	0	1	13.3%
E	17	16	15	14	10	7	82.4%
F	22	20	16	15	15	11	68.2%
G	19	11	13	12	9	8	63.2%
H	68	36	30	22	20	15	32.4%
I	58	34	26	13	13	14	22.4%
J	88	72	62	51	43	30	58.0%
K	40	32	28	20	20	16	50.0%
L	28	20	17	14	11	9	50.0%
M	34	26	21	18	15	11	52.9%
N	94	64	49	44	28	19	46.8%
O	88	80	67	60	50	43	68.2%
TOTAL	874	593	486	395	323	258	45.2%

Note: See Exhibit 16 for parking lot locations.



NOTE:

Lot A - Lot O = Surface Parking
 Lot P - Lot T = Parking Structure
 (above and below ground)

LEGEND:

--- Boundary of 3 block study area



NOT TO SCALE



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EXISTING PARKING LOT LOCATIONS

EXHIBIT 17

The trip generation analysis showed 385 new inbound a.m. peak period trips associated with the project. This accounts for the one new courtroom, relocation of Madge Bradley and Family Law and the relocation of the Kearney Mesa courtroom. For this analysis it is assumed that 15 of these trips are associated with judges or key personnel who will park on site in the available 60 spaces. Therefore, the a.m. peak period demand for off-site parking is 370 vehicles.

The existing available surface parking lots would have sufficient capacity to accommodate the additional parking demand for the project. Additional parking would also be available in the surrounding parking structures and in parking lots outside the three block radius. Therefore, sufficient parking capacity is available to serve this site.

As stated previously, the existing building and existing public parking lot located on the proposed project site will be demolished with the construction of the new courthouse. With the removal of these uses, both parking demand and parking supply will be reduced. The existing 181 space public parking lot will be removed from the existing available inventory in downtown San Diego. With this understanding, the public parking lot contained on the site was not included in the evaluation of available parking capacity with the proposed project.

The existing uses on the site (45,000 sf of office space) generate a demand for parking that will be eliminated when the courthouse is constructed. During the survey period, approximately 125 of the 181 parking spaces were occupied within this lot. Observations showed that this lot is used by both visitors of the existing buildings and by those who park and walk to other destinations downtown. In addition, removal of the Old Jail and the San Diego County office uses within the existing Courthouse will reduce the demand for parking around the project site. According to the trip generation forecast for the a.m. peak period, 326 trips during the a.m. peak period would be removed. It is reasonable to assume that this demand for parking would also be removed during the a.m. peak period when parking demand for the courthouse peaks.

As stated previously, there are more than 2,620 parking spaces located in downtown within three blocks of the proposed project site (not including the existing parking lot on the property). The survey showed that nearly half of these parking spaces in both surface lots and parking structures were available during the survey period from 7:30 to 9:30 a.m. Clearly the 326 a.m. peak period trips removed from the network exceeds the number of spaces removed (181) with the site.

CONCLUSION

This study analyzes the forecast traffic impact of the proposed San Diego County Courthouse project in the downtown area of the City of San Diego. The proposed location is bound by B Street to the north, C Street to the south, State Street to the east, and Union Street to the west. An office building and a public parking lot currently occupy the site.

The proposed project will include 71 courtrooms. Of the 71 courtrooms, 59 will relocate from the existing courthouse immediately east of the proposed project site. Ten of the 71 courtrooms will relocate from the Madge Bradley and Family Law Courthouse several blocks northeast of the proposed courthouse site. One courtroom will be relocate from Kearney Mesa, and the AOC will add one new court room. Sixty of the 71 court rooms will provide space for jury trials, while the remaining courtrooms will serve probate, small claims, and family court and will not have a jury call. Only two of the courtrooms, the new courtroom and the relocated courtroom from Kearney Mesa, will generate new trips to downtown San Diego.

Construction of the new building will displace one set of existing office buildings and a public parking lot (181 spaces). The removal of these buildings will reduce the parking demand traffic in the study area.

After the completion of the new courthouse, the courts will vacate all existing facilities. The AOC will demolish the existing County Courthouse and Old Jail. The AOC currently has no plans to redevelop the existing County Courthouse site.

The proposed project will generate approximately 134 new trips per day. Another 721 trips per day will be redistributed through downtown to account for the relocation of the Madge Bradley and Family Law courthouses. During the a.m. peak period, 385 new trips per day will be added to the roadway network in the vicinity of the proposed project site.

In addition to evaluating traffic operating conditions, this report also discusses the project parking demands. The Superior Court will vacate use of 66 parking spaces on the County-owned block between State Street, A Street, Union Street, and B Street and one space in the County Courthouse, and the new courthouse will provide approximately 110 secured underground parking spaces for judges and court staff. The new courthouse's parking capacity eliminates part of the parking demand associated with the Superior Court's consolidation of its Madge Bradley and Family Law operations, the Kearney Mesa courtroom, and the new courtroom. All others will be required to park off site in the existing surface parking lots, public parking structures or on the street. In

addition to the existing offsite demand, a total of 370 parking spaces will be needed to serve the new courthouse.

Analysts calculated project-generated trips based on rates established for similar facilities. Courtroom trip rates were categorized in to jury and non-jury trials. The forecast project-generated trips were assigned to the roadway network and added to the existing a.m. peak hour and daily volumes to determine the short-term project impacts. The addition of the forecast project-generated trips to the existing conditions does not result in a change in LOS from acceptable to deficient at any study intersection or along any study roadway segment. Therefore, no significant impacts are forecast for any study intersections under Existing Plus Project conditions.

The project is forecast to open in the year 2013. To evaluate traffic operations for the project opening year, a growth rate factor was applied to all intersections and roadway segments. Growth rate factors were calculated based on forecast year 2030 volumes prepared for the Downtown Community Plan Update. This cumulative condition was evaluated with and without the proposed project.

Based on City of San Diego significant impact thresholds, no direct project impacts are identified for Existing or Cumulative conditions. Therefore, no mitigation is required.

The project will provide 60 on-site parking spaces. These spaces will be restricted to judges and key court staff. All other vehicles will be required to park off-site in public parking lots. An inventory of available public surface parking lots revealed that there are 874 parking spaces within a three block radius of the project site. A field occupancy survey conducted in March 2010 revealed that at 8:30 a.m., when the peak demand for parking for the courts would be occur, approximately 45% of the total surface parking spaces were unoccupied. The project would have a need for 370 parking spaces. Clearly this demand could be met by the surface parking spaces alone, with 395 parking spaces available at 8:30 a.m. However, there are over 1,700 public parking spaces available in parking structures near the project site. The demand for parking for the courthouse would be met both in the existing parking structures and parking lots. Therefore, there is sufficient parking within the three block radius to meet the parking demands of the courthouse.

Although the project will remove 181 parking spaces that currently exist on the proposed site, the project will also reduce the demand for parking. According to the trip generation analysis, the removal trips associated with the demolition of the existing courthouse and the demolition of the existing office buildings on the proposed site will result in a decline in parking demand by as much as 326 vehicles. Therefore, the removal of the parking lot will not negatively impact the parking supply in the project vicinity.

APPENDIX A

Existing Traffic Count Data

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Union St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: Ash St

DAY: THURSDAY

PROJECT# 10-4107-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 0	ER 0	WL 0	WT 3	WR 0	TOTAL
7:30 AM	3	4			11	3				62	306	13	402
7:45 AM	1	9			21	9				56	364	20	480
8:00 AM	4	8			32	8				56	343	15	466
8:15 AM	5	5			21	1				52	373	20	477
8:30 AM	5	13			28	11				43	364	15	479
8:45 AM	2	5			31	11				40	329	8	426
9:00 AM	7	10			13	5				29	266	12	342
9:15 AM	5	9			14	7				27	249	10	321
TOTAL VOLUMES =	NL 32	NT 63	NR 0	SL 0	ST 171	SR 55	EL 0	ET 0	ER 0	WL 365	WT 2594	WR 113	TOTAL 3393

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	15	35	0	0	102	29	0	0	0	207	1444	70	1902
PEAK HR. FACTOR:		0.694			0.819			0.000			0.967		0.991

CONTROL: Signalized

Intersection Turning Movement

Prepared by:



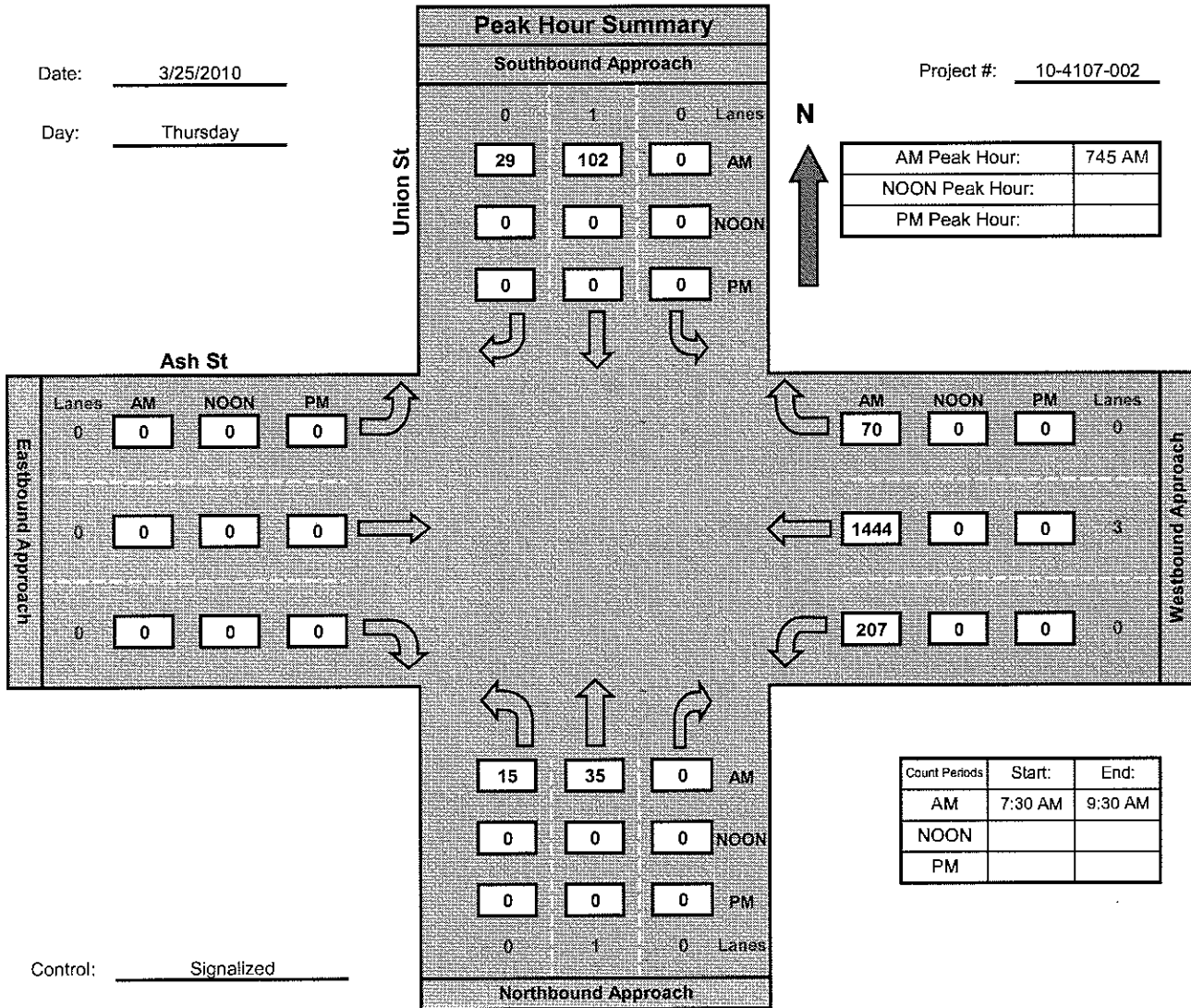
National Data & Surveying Services

Union St and Ash St, City of San Diego

Date: 3/25/2010

Day: Thursday

Project #: 10-4107-002



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Front St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: Ash St

DAY: THURSDAY

PROJECT# 10-4107-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	3	0	0	0	0	1.5	2.5	0	
7:30 AM					248	66				100	317		731
7:45 AM					285	99				101	362		847
8:00 AM					264	77				120	341		802
8:15 AM					289	81				135	362		867
8:30 AM					264	75				129	339		807
8:45 AM					255	69				109	290		723
9:00 AM					218	68				90	222		598
9:15 AM					197	67				78	201		543
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 0	ST 2020	SR 602	EL 0	ET 0	ER 0	WL 862	WT 2434	WR 0	TOTAL 5918

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	0	0	0	0	1102	332	0	0	0	485	1404	0	3323
PEAK HR. FACTOR:		0.000			0.934			0.000			0.950		0.958

CONTROL: Signalized

Intersection Turning Movement



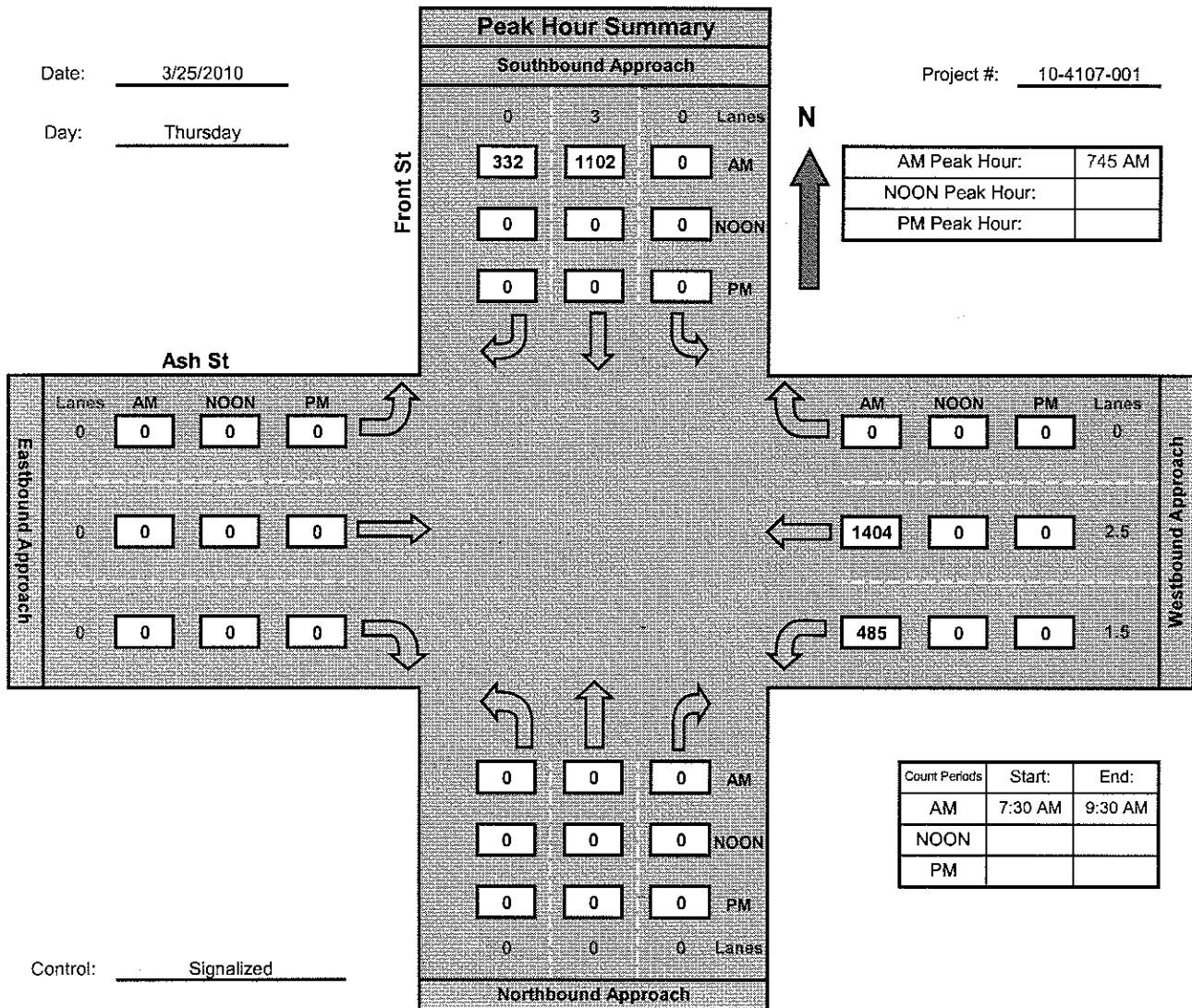
National Data & Surveying Services

Front St and Ash St, City of San Diego

Date: 3/25/2010

Day: Thursday

Project #: 10-4107-001



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: 1st Ave

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: A St

DAY: THURSDAY

PROJECT# 10-4107-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	3	0	0	0	0	0	3	0	0	0	0	
7:30 AM		178	25				64	73					340
7:45 AM		163	23				60	83					329
8:00 AM		179	37				76	68					360
8:15 AM		166	33				68	95					362
8:30 AM		180	30				77	71					358
8:45 AM		163	41				77	58					339
9:00 AM		160	34				82	99					375
9:15 AM		141	42				56	82					321
TOTAL VOLUMES =	NL 0	NT 1330	NR 265	SL 0	ST 0	SR 0	EL 560	ET 629	ER 0	WL 0	WT 0	WR 0	TOTAL 2784

AM Peak Hr Begins at: 815 AM

PEAK VOLUMES =	0	669	138	0	0	0	304	323	0	0	0	0	1434
PEAK HR. FACTOR:		0.961			0.000			0.866			0.000		0.956

CONTROL: Signalized

Intersection Turning Movement



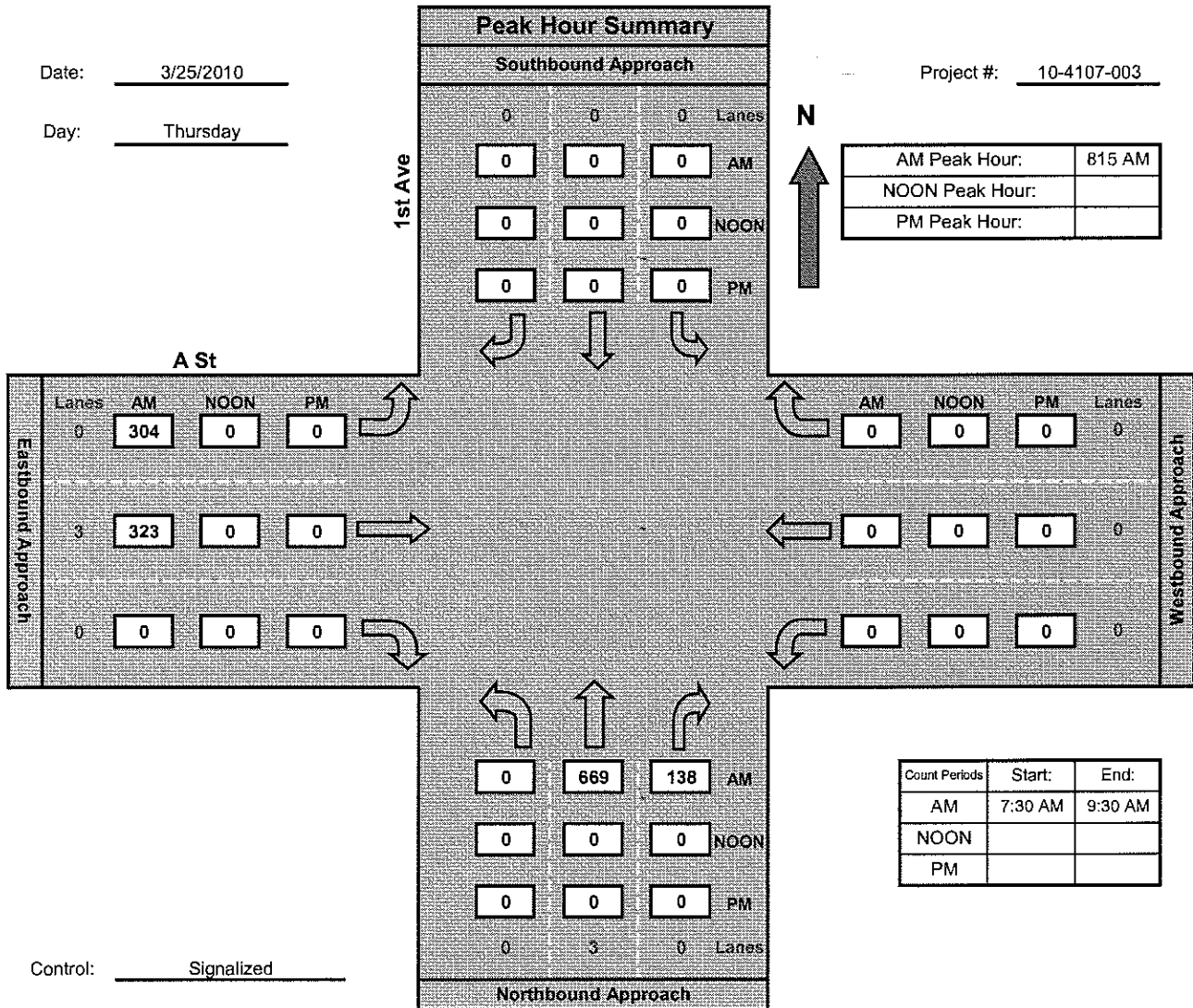
National Data & Surveying Services

1st Ave and A St, City of San Diego

Date: 3/25/2010

Day: Thursday

Project #: 10-4107-003



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: State St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: B St

DAY: THURSDAY

PROJECT# 10-4107-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	3	0	0	0	0	0	1	0	0	.5	.5	
7:30 AM	17	26	8				15	7			34	24	131
7:45 AM	12	32	5				22	9			35	35	150
8:00 AM	6	29	10				18	11			39	45	158
8:15 AM	6	21	12				18	7			42	43	149
8:30 AM	10	28	9				17	8			37	48	157
8:45 AM	12	20	10				17	7			34	39	139
9:00 AM	14	25	7				18	11			29	36	140
9:15 AM	4	22	8				12	15			36	22	119
TOTAL VOLUMES =	NL 81	NT 203	NR 69	SL 0	ST 0	SR 0	EL 137	ET 75	ER 0	WL 0	WT 286	WR 292	TOTAL 1143

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	34	110	36	0	0	0	75	35	0	0	153	171	614
PEAK HR. FACTOR:		0.918			0.000			0.887			0.953		0.972

CONTROL: 3-Way Stop (NB/EB/WB)

Intersection Turning Movement

Prepared by:



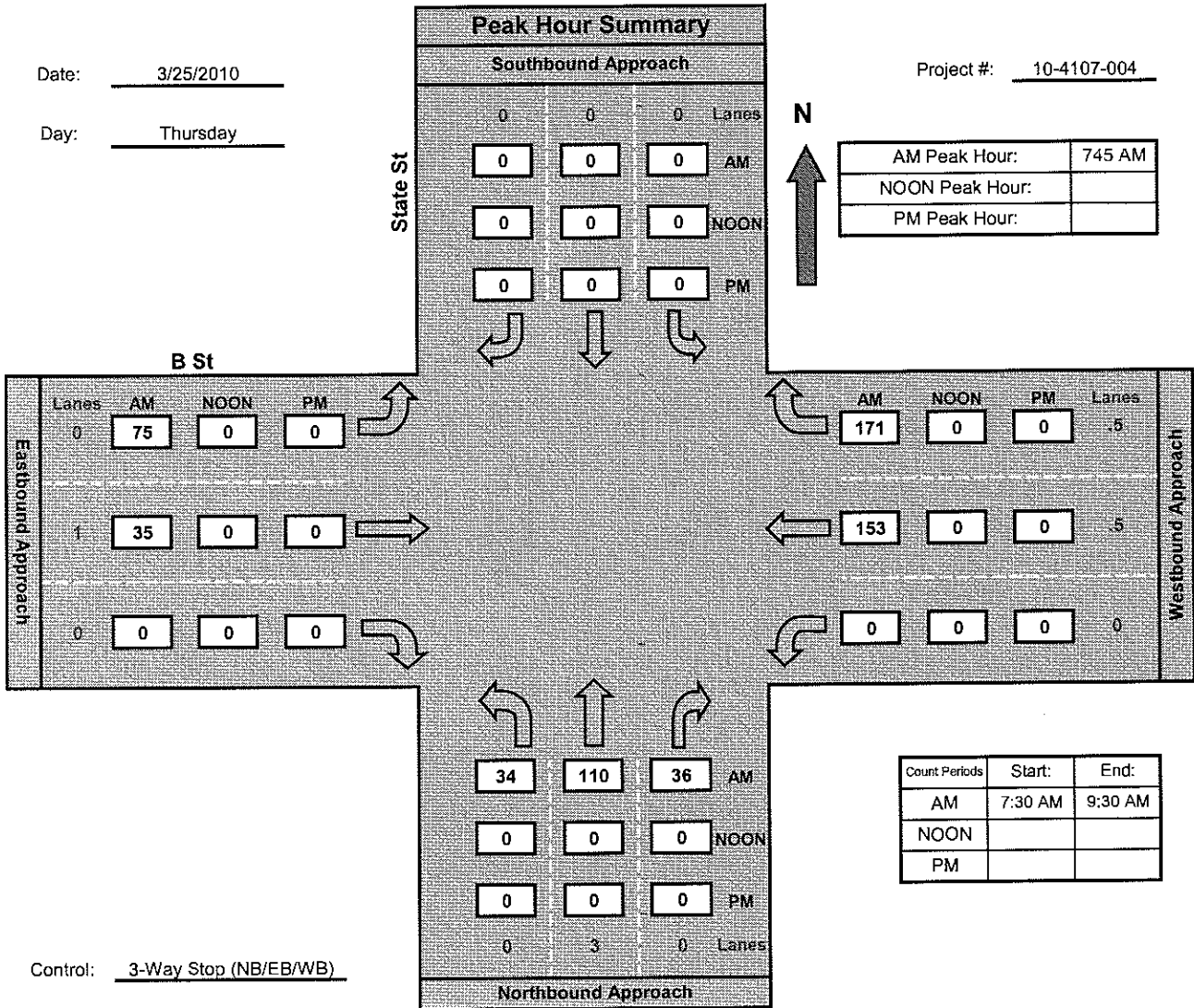
National Data & Surveying Services

State St and B St, City of San Diego

Date: 3/25/2010

Day: Thursday

Project #: 10-4107-004



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Union St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: B St

DAY: THURSDAY

PROJECT# 10-4107-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:30 AM	4	15	3	2	30	17	5	11	2	3	34	9	135
7:45 AM	7	16	2	8	43	12	2	9	6	6	50	17	178
8:00 AM	8	19	6	2	34	18	3	10	7	8	61	13	189
8:15 AM	1	13	2	2	28	8	1	11	5	8	73	15	167
8:30 AM	7	32	6	2	25	28	1	11	6	6	52	10	186
8:45 AM	7	24	4	2	35	25	2	12	5	13	43	10	182
9:00 AM	2	23	6	1	25	18	2	8	8	4	46	13	156
9:15 AM	4	15	4	2	21	14	1	14	7	3	37	10	132
TOTAL VOLUMES =	NL 40	NT 157	NR 33	SL 21	ST 241	SR 140	EL 17	ET 86	ER 46	WL 51	WT 396	WR 97	TOTAL 1325

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	23	88	18	8	122	79	7	44	23	35	229	48	724
PEAK HR. FACTOR:	0.717			0.843			0.925			0.813			0.958

CONTROL: 4-Way Stop

Intersection Turning Movement

Prepared by:



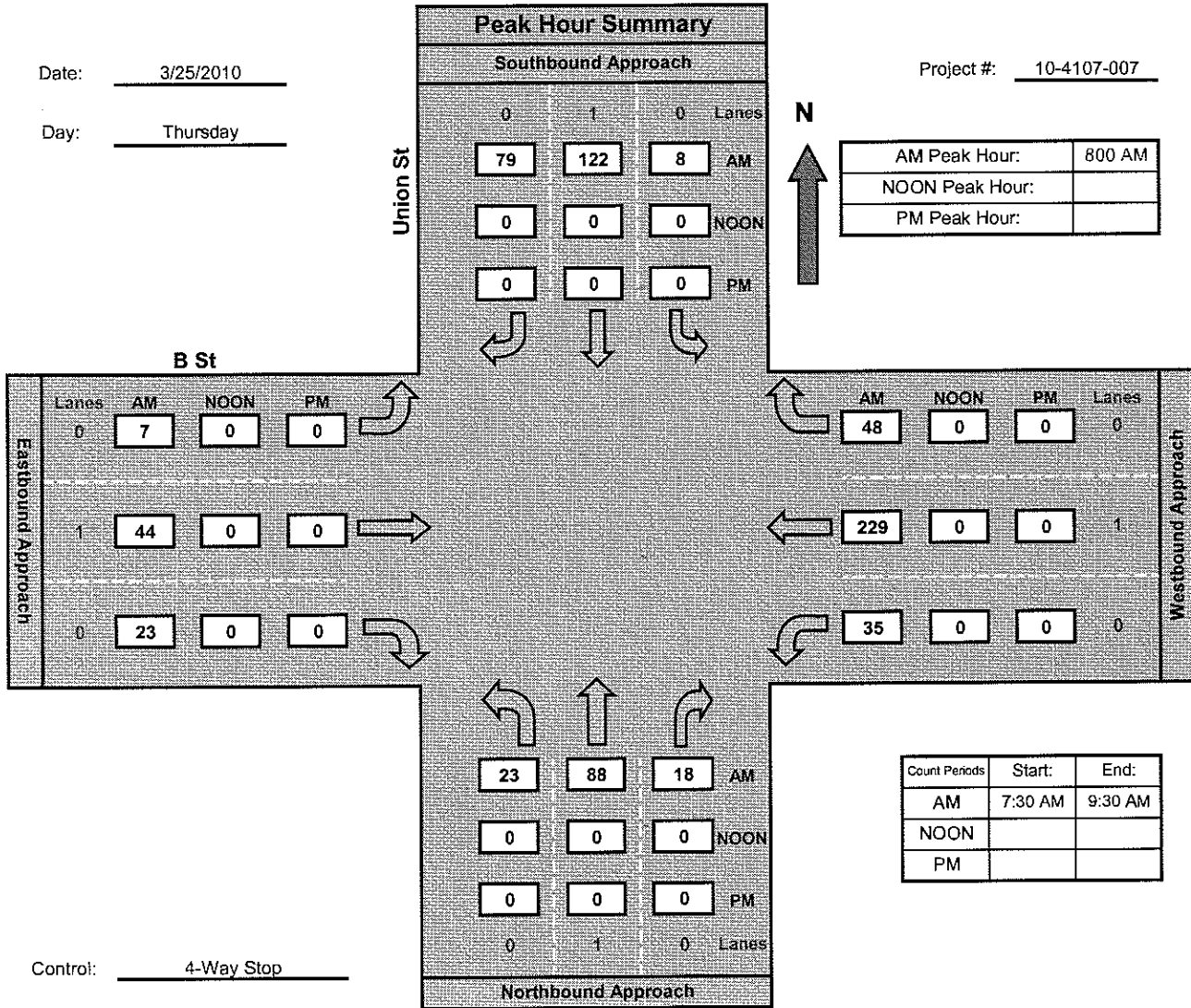
National Data & Surveying Services

Union St and B St, City of San Diego

Date: 3/25/2010

Day: Thursday

Project #: 10-4107-007



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Front St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: B St

DAY: THURSDAY

PROJECT# 10-4107-010

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	3	0	0	1	0	0	1	0	
7:30 AM				10	230	38		17	3	7	6		311
7:45 AM				8	257	56		10	10	6	15		362
8:00 AM				13	313	62		12	5	7	21		433
8:15 AM				9	332	74		9	5	9	20		458
8:30 AM				11	325	52		10	9	6	17		430
8:45 AM				7	270	57		12	6	10	11		373
9:00 AM				8	241	55		8	6	5	8		331
9:15 AM				9	264	37		12	7	13	10		352
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 75	ST 2232	SR 431	EL 0	ET 90	ER 51	WL 63	WT 108	WR 0	TOTAL 3050

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	0	0	0	40	1240	245	0	43	25	32	69	0	1694
PEAK HR. FACTOR:		0.000			0.919			0.895			0.871		0.925

CONTROL: Signalized

Intersection Turning Movement

Prepared by:



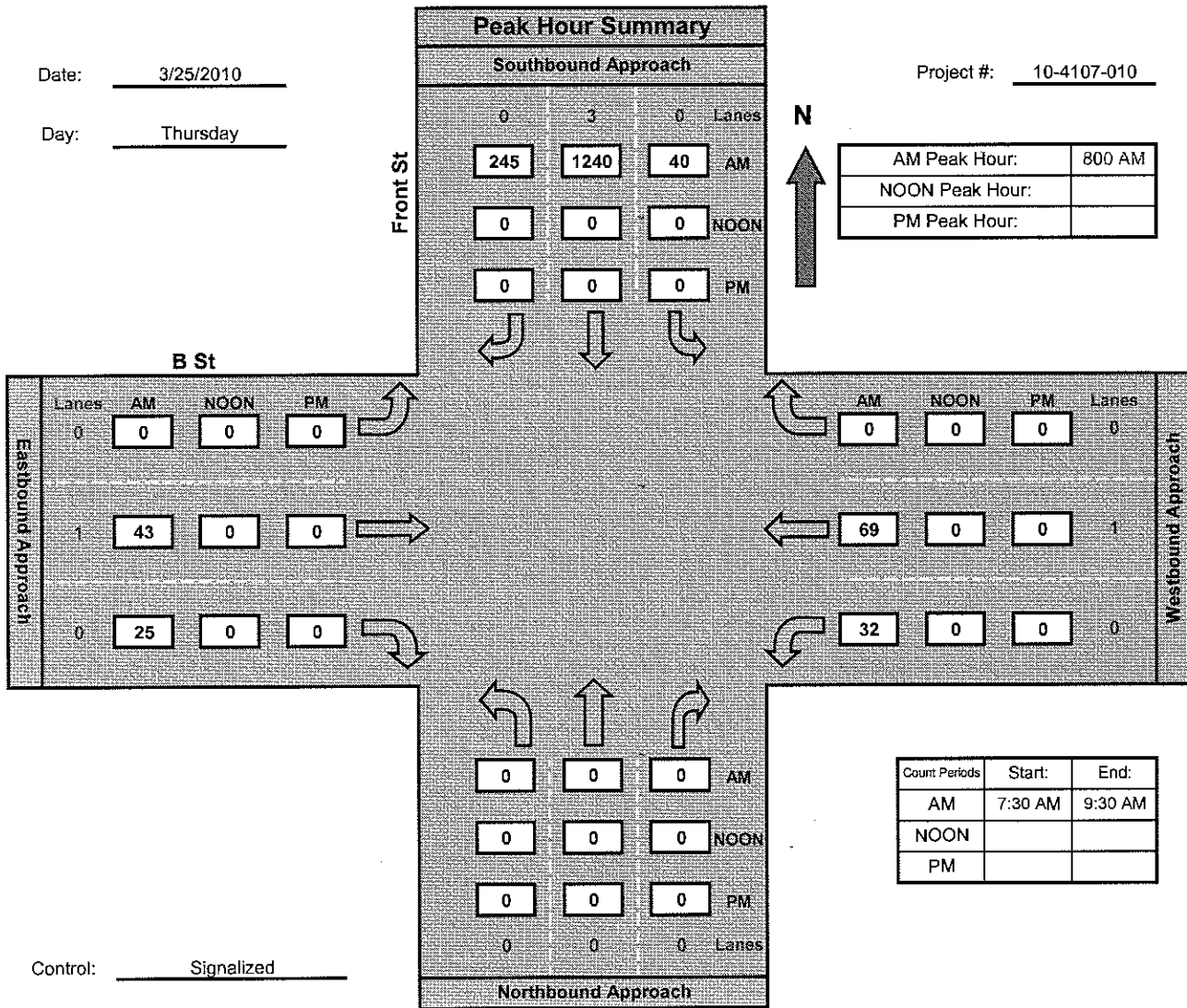
National Data & Surveying Services

Front St and B St, City of San Diego

Date: 3/25/2010

Day: Thursday

Project #: 10-4107-010



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: State St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: C St

DAY: THURSDAY

PROJECT# 10-4107-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	3	0	0	0	0	0	2	0	0	0	0	
7:30 AM		69	3				12	3					87
7:45 AM		53	7				7	3					70
8:00 AM		54	0				7	8					69
8:15 AM		62	4				8	5					79
8:30 AM		43	4				9	10					66
8:45 AM		46	4				12	3					65
9:00 AM		45	0				14	1					60
9:15 AM		35	7				11	6					59
TOTAL VOLUMES =	NL 0	NT 407	NR 29	SL 0	ST 0	SR 0	EL 80	ET 39	ER 0	WL 0	WT 0	WR 0	TOTAL 555

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	0	238	14	0	0	0	34	19	0	0	0	0	305
PEAK HR. FACTOR:		0.875			0.000			0.883			0.000		0.876

CONTROL: 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:



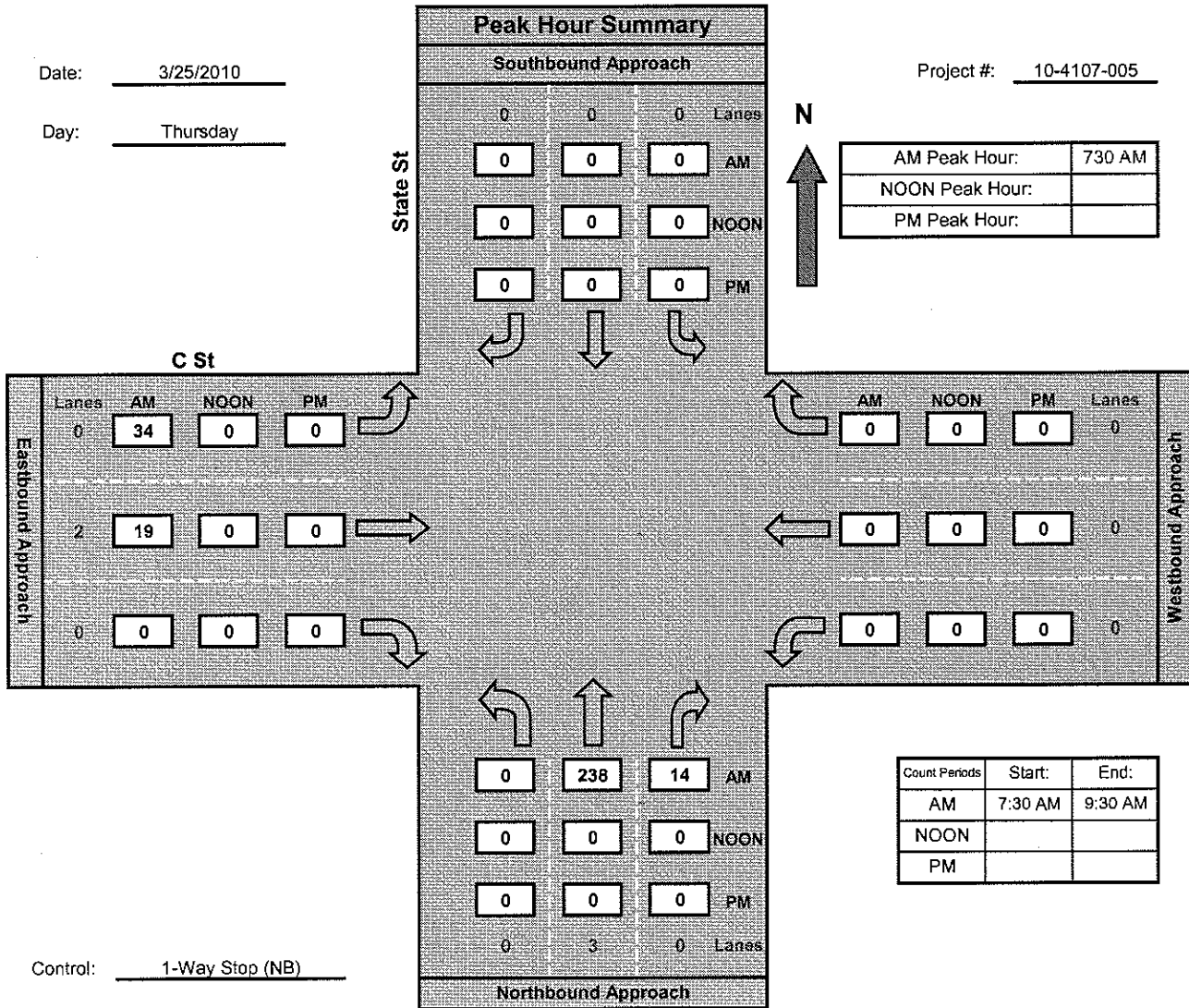
National Data & Surveying Services

State St and C St, City of San Diego

Date: 3/25/2010

Day: Thursday

Project #: 10-4107-005



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Union St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: C St

DAY: THURSDAY

PROJECT# 10-4107-008

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL .5	ET 1	ER .5	WL 0	WT 0	WR 0	TOTAL
7:30 AM		26	7	1	35		0	4	1				74
7:45 AM		29	6	4	47		0	5	5				96
8:00 AM		40	12	1	41		1	2	2				99
8:15 AM		39	12	6	44		0	6	3				110
8:30 AM		43	7	2	24		1	7	5				89
8:45 AM		37	9	4	44		0	5	1				100
9:00 AM		28	11	0	32		1	0	0				72
9:15 AM		26	6	3	19		3	6	3				66
TOTAL VOLUMES =	NL 0	NT 268	NR 70	SL 21	ST 286	SR 0	EL 6	ET 35	ER 20	WL 0	WT 0	WR 0	TOTAL 706

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	0	159	40	13	153	0	2	20	11	0	0	0	398
PEAK HR. FACTOR:		0.957			0.830			0.635			0.000		0.905

CONTROL: 2-Way Stop (NB/SB)

Intersection Turning Movement

Prepared by:



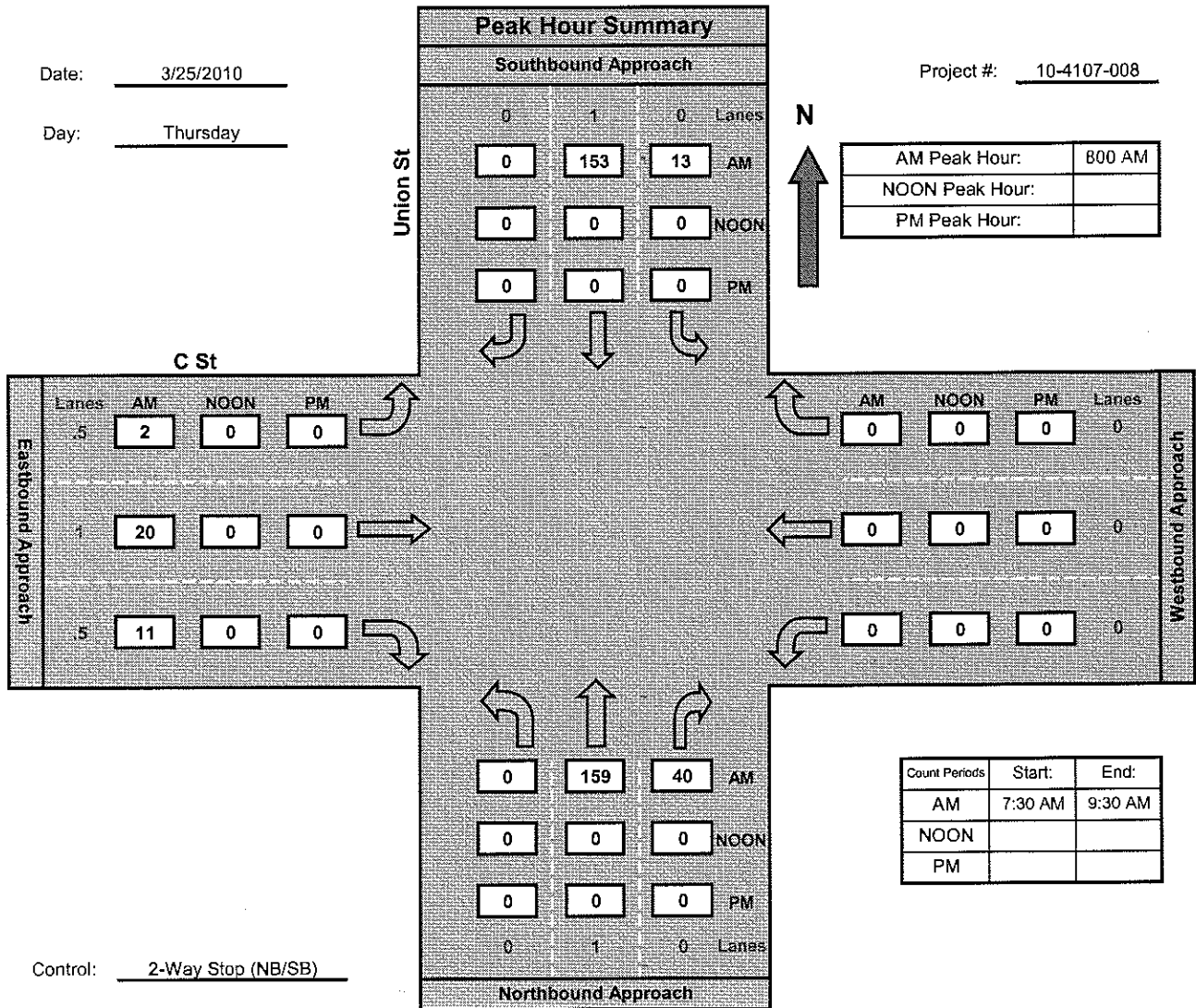
National Data & Surveying Services

Union St and C St, City of San Diego

Date: 3/25/2010

Day: Thursday

Project #: 10-4107-008



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: State St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: Broadway

DAY: THURSDAY

PROJECT# 10-4107-006

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	0	0	1	2	0	1	2	0	
7:30 AM							13	63	8	6	101	85	276
7:45 AM							16	51	11	16	129	94	317
8:00 AM							17	60	6	10	107	71	271
8:15 AM							18	67	7	10	134	95	331
8:30 AM							13	80	10	12	129	45	289
8:45 AM							12	70	11	19	120	59	291
9:00 AM							12	71	11	13	101	34	242
9:15 AM							14	74	4	9	100	33	234
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 0	ST 0	SR 0	EL 115	ET 536	ER 68	WL 95	WT 921	WR 516	TOTAL 2251

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	0	0	0	0	0	0	64	258	34	48	499	305	1208
PEAK HR. FACTOR:	0.000			0.000			0.864			0.891			0.912

CONTROL: Signalized

Intersection Turning Movement

Prepared by:



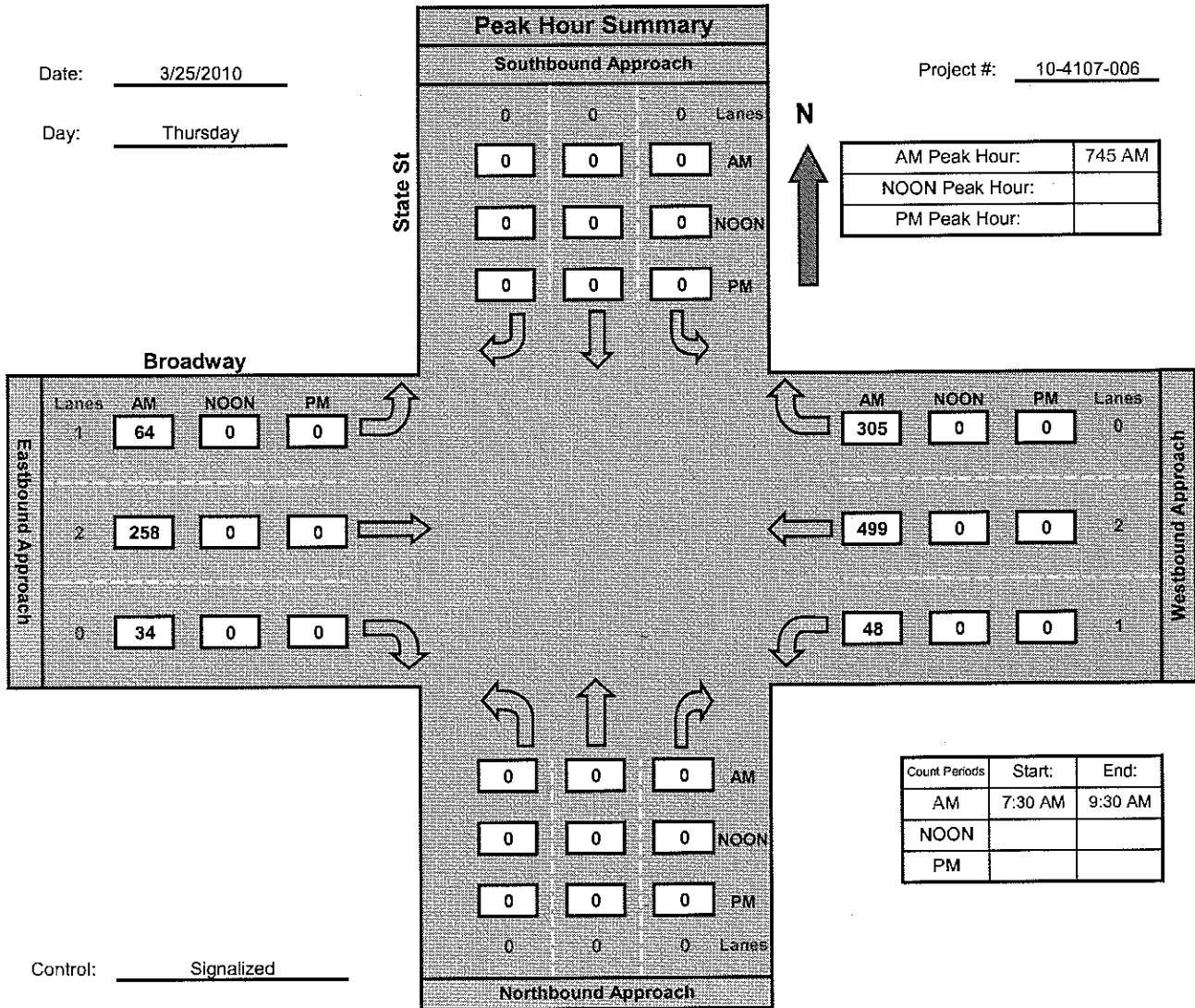
National Data & Surveying Services

State St and Broadway, City of San Diego

Date: 3/25/2010

Day: Thursday

Project #: 10-4107-006



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Union St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: Broadway

DAY: THURSDAY

PROJECT# 10-4107-009

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	1	0	1	2	0	1	2	0	
7:30 AM				7		26	4	60			167	32	296
7:45 AM				15		32	4	40			196	41	328
8:00 AM				8		27	3	70			169	50	327
8:15 AM				15		33	4	58			205	60	375
8:30 AM				9		16	2	75			169	44	315
8:45 AM				10		33	4	73			165	46	331
9:00 AM				10		19	0	70			124	35	258
9:15 AM				9		19	2	73			127	28	258
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 83	ST 0	SR 205	EL 23	ET 519	ER 0	WL 0	WT 1322	WR 336	TOTAL 2488

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	0	0	0	42	0	109	13	276	0	0	708	200	1348
PEAK HR. FACTOR:	0.000			0.786			0.938			0.857			0.899

CONTROL: Signalized

Intersection Turning Movement

Prepared by:



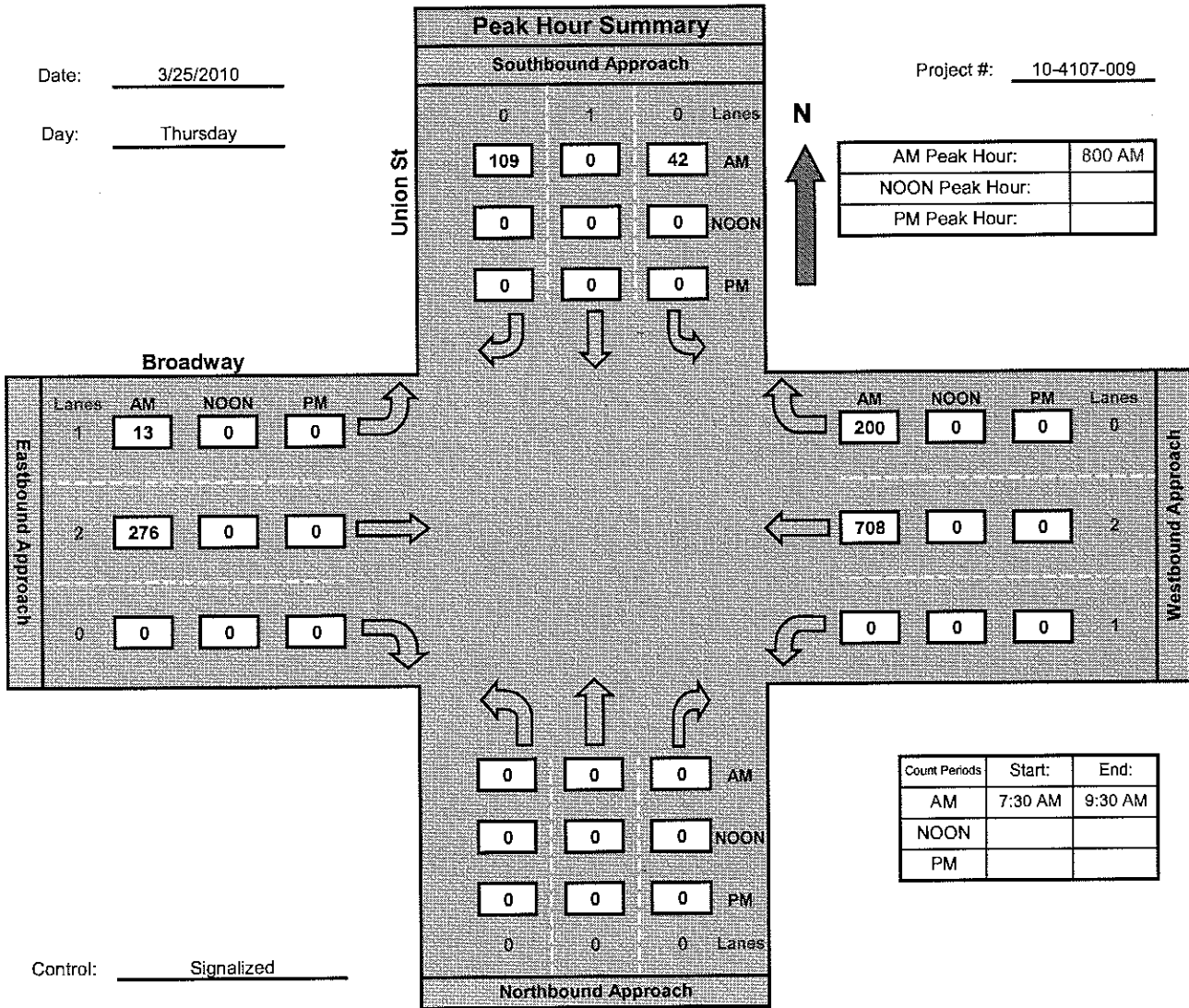
National Data & Surveying Services

Union St and Broadway, City of San Diego

Date: 3/25/2010

Day: Thursday

Project #: 10-4107-009



Prepared by NCEMWD

Volumes for: Thursday, March 25, 2010				City: San Diego	Daily Totals				
Location: Ash St. between Front & 1st Ave				Project: 10-4100-001	NB	SB	EB	WB	Total
					0	0	0	14,847	14,847

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB	
00:00				36	12:00				199	
00:15				16	12:15				260	
00:30				14	12:30				273	
00:45				15	12:45				309	1041
				81						1041
				81						
01:00				28	13:00				332	
01:15				23	13:15				279	
01:30				21	13:30				285	
01:45				11	13:45				260	1156
				83						1156
				83						
02:00				14	14:00				240	
02:15				13	14:15				248	
02:30				9	14:30				222	
02:45				9	14:45				234	944
				45						944
				45						
03:00				10	15:00				193	
03:15				2	15:15				233	
03:30				11	15:30				218	
03:45				11	15:45				190	834
				34						834
				34						
04:00				7	16:00				194	
04:15				7	16:15				186	
04:30				19	16:30				182	
04:45				46	16:45				220	782
				79						782
				79						
05:00				30	17:00				220	
05:15				40	17:15				207	
05:30				70	17:30				179	
05:45				90	17:45				198	804
				230						804
				230						
06:00				97	18:00				235	
06:15				142	18:15				198	
06:30				145	18:30				186	
06:45				235	18:45				186	805
				619						805
				619						
07:00				246	19:00				168	
07:15				302	19:15				128	
07:30				398	19:30				136	
07:45				447	19:45				130	562
				1393						562
				1393						
08:00				453	20:00				131	
08:15				432	20:15				118	
08:30				448	20:30				99	
08:45				387	20:45				100	448
				1720						448
				1720						
09:00				304	21:00				101	
09:15				259	21:15				101	
09:30				191	21:30				113	
09:45				205	21:45				90	405
				959						405
				959						
10:00				174	22:00				79	
10:15				147	22:15				75	
10:30				161	22:30				54	
10:45				158	22:45				70	278
				640						278
				640						
11:00				177	23:00				44	
11:15				157	23:15				34	
11:30				228	23:30				32	
11:45				197	23:45				36	146
				759						146
				759						

Hourly Totals				Daily Totals				
Hour	AM	PM	Volume	Hour	AM	PM	Volume	Hour
00:00				00:00				
00:15				00:15				
00:30				00:30				
00:45				00:45				
01:00				01:00				
01:15				01:15				
01:30				01:30				
01:45				01:45				
02:00				02:00				
02:15				02:15				
02:30				02:30				
02:45				02:45				
03:00				03:00				
03:15				03:15				
03:30				03:30				
03:45				03:45				
04:00				04:00				
04:15				04:15				
04:30				04:30				
04:45				04:45				
05:00				05:00				
05:15				05:15				
05:30				05:30				
05:45				05:45				
06:00				06:00				
06:15				06:15				
06:30				06:30				
06:45				06:45				
07:00				07:00				
07:15				07:15				
07:30				07:30				
07:45				07:45				
08:00				08:00				
08:15				08:15				
08:30				08:30				
08:45				08:45				
09:00				09:00				
09:15				09:15				
09:30				09:30				
09:45				09:45				
10:00				10:00				
10:15				10:15				
10:30				10:30				
10:45				10:45				
11:00				11:00				
11:15				11:15				
11:30				11:30				
11:45				11:45				

Prepared by NDI/WD

Volumes for: Thursday, March 25, 2010						City: San Diego		Daily Totals				Total
Location: S St. between Columbia St & State St						Project: 10-4108-003		NB	SB	EB	WB	
								0	0	2,480	2,332	4,812
AM Period	NB	SB	EB	WB		PM Period	NB	SB	EB	WB		
00:00			8	2		12:00			37	35		
00:15			10	5		12:15			38	26		
00:30			2	6		12:30			35	32		
00:45			7	27	2 15 42	12:45			45	155	37 130	285
01:00			10	3		13:00			38	49		
01:15			7	1		13:15			36	24		
01:30			6	0		13:30			35	34		
01:45			3	26	1 5 31	13:45			28	137	33 140	277
02:00			9	4		14:00			35	31		
02:15			4	3		14:15			31	29		
02:30			2	0		14:30			38	23		
02:45			4	19	0 7 26	14:45			37	141	34 117	258
03:00			1	1		15:00			32	34		
03:15			1	1		15:15			37	19		
03:30			0	1		15:30			41	21		
03:45			1	3	2 5 8	15:45			46	156	36 110	266
04:00			2	1		16:00			42	27		
04:15			4	1		16:15			51	28		
04:30			0	1		16:30			51	26		
04:45			2	8	3 6 14	16:45			66	210	31 112	322
05:00			9	10		17:00			94	43		
05:15			12	7		17:15			81	39		
05:30			10	8		17:30			76	40		
05:45			15	46	12 37 83	17:45			65	316	35 157	473
06:00			13	11		18:00			52	44		
06:15			15	18		18:15			44	34		
06:30			10	19		18:30			45	42		
06:45			11	49	22 70 119	18:45			31	172	34 154	326
07:00			23	23		19:00			41	37		
07:15			15	35		19:15			23	36		
07:30			27	45		19:30			31	37		
07:45			31	96	51 154 250	19:45			21	116	35 145	261
08:00			30	47		20:00			34	24		
08:15			25	59		20:15			24	28		
08:30			33	58		20:30			24	28		
08:45			31	119	55 219 338	20:45			22	104	17 97	201
09:00			28	45		21:00			26	26		
09:15			32	60		21:15			19	19		
09:30			34	39		21:30			28	21		
09:45			29	123	47 191 314	21:45			16	89	15 81	170
10:00			28	39		22:00			27	17		
10:15			35	31		22:15			21	10		
10:30			15	37		22:30			18	9		
10:45			36	114	29 136 250	22:45			13	79	10 46	125
11:00			22	44		23:00			22	18		
11:15			27	47		23:15			12	9		
11:30			43	29		23:30			8	14		
11:45			32	124	32 152 276	23:45			9	51	5 46	97

Grand Total	PM		PM		PM		PM		PM	

Prepared by: MCDOT

Volumes for: Thursday, March 25, 2010				City: San Diego	Daily Totals				Total
Location: C St. Between Front St & 1st Ave				Project: 10-4108-003	NB	SB	EB	WB	
					0	0	1,856	0	1,856

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			6		12:00			32	
00:15			1		12:15			37	
00:30			3		12:30			40	
00:45			3	13	12:45			34	143
01:00			4		13:00			30	
01:15			0		13:15			35	
01:30			0		13:30			27	
01:45			1	5	13:45			34	126
02:00			1		14:00			30	
02:15			3		14:15			32	
02:30			1		14:30			30	
02:45			3	8	14:45			37	129
03:00			3		15:00			28	
03:15			0		15:15			28	
03:30			2		15:30			30	
03:45			1	6	15:45			25	111
04:00			1		16:00			31	
04:15			3		16:15			46	
04:30			3		16:30			27	
04:45			6	13	16:45			20	124
05:00			5		17:00			23	
05:15			4		17:15			25	
05:30			8		17:30			15	
05:45			15	32	17:45			18	81
06:00			13		18:00			17	
06:15			11		18:15			14	
06:30			22		18:30			18	
06:45			31	77	18:45			9	58
07:00			28		19:00			7	
07:15			33		19:15			8	
07:30			47		19:30			10	
07:45			54	162	19:45			13	38
08:00			48		20:00			10	
08:15			60		20:15			15	
08:30			59		20:30			13	
08:45			68	235	20:45			8	46
09:00			37		21:00			11	
09:15			33		21:15			9	
09:30			25		21:30			10	
09:45			46	141	21:45			9	39
10:00			29		22:00			8	
10:15			34		22:15			10	
10:30			28		22:30			12	
10:45			19	110	22:45			6	36
11:00			20		23:00			7	
11:15			21		23:15			7	
11:30			29		23:30			9	
11:45			32	102	23:45			8	31

Total Vol.				Daily Totals				Total
				NB	SB	EB	WB	
				0	0	1,856	0	1,856
Split Vol.				Peak Hr.				Total
				NB	SB	EB	WB	
Peak Hr.	08:30	08:30	Peak Hr.			11:00		11:00
Volume	235	235	Volume			141		141
Split	1,854	0,004	Split			0,004		0,004
P. S. Vol.	141	235	P. S. Vol.			141		235
Peak Hr.	08:30	08:30	Peak Hr.			11:00		11:00
Volume	235	235	Volume			141		141
Split	1,854	0,004	Split			0,004		0,004

Prepared by NDI/ATD

volumes for Thursday, March 25, 2010						City: San Diego		Daily Totals				Total
Location: Broadway between Front St & 1st Ave Project: 10-4100-004								NB	SB	EB	WB	
								0	0	9,386	10,962	20,754
AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00		35	37		12:00			151	163			
00:15		32	20		12:15			166	178			
00:30		18	28		12:30			156	192			
00:45		26	111	26	12:45			159	632	166	699	1331
01:00		14	19		13:00			133	190			
01:15		24	17		13:15			134	184			
01:30		8	10		13:30			167	175			
01:45		19	65	12	13:45			163	597	174	723	1320
02:00		12	12		14:00			192	153			
02:15		8	15		14:15			167	186			
02:30		6	7		14:30			161	187			
02:45		7	33	8	14:45			144	664	189	715	1379
03:00		12	7		15:00			175	148			
03:15		3	7		15:15			164	165			
03:30		7	9		15:30			159	135			
03:45		14	36	11	15:45			159	657	128	576	1233
04:00		8	16		16:00			158	145			
04:15		13	15		16:15			164	141			
04:30		14	22		16:30			181	163			
04:45		12	47	32	16:45			199	702	182	631	1333
05:00		19	30		17:00			194	151			
05:15		27	43		17:15			191	169			
05:30		23	51		17:30			197	149			
05:45		28	97	77	17:45			222	804	141	610	1414
06:00		60	88		18:00			147	115			
06:15		55	98		18:15			151	137			
06:30		49	129		18:30			121	141			
06:45		62	226	163	18:45			160	579	131	524	1103
07:00		73	164		19:00			132	127			
07:15		68	214		19:15			142	121			
07:30		102	219		19:30			128	111			
07:45		112	355	222	19:45			105	507	117	476	983
08:00		93	241		20:00			147	100			
08:15		104	254		20:15			115	116			
08:30		114	197		20:30			116	87			
08:45		134	445	221	20:45			118	496	103	406	902
09:00		140	172		21:00			112	88			
09:15		123	188		21:15			138	82			
09:30		106	162		21:30			142	92			
09:45		136	505	164	21:45			125	517	70	332	849
10:00		129	144		22:00			146	74			
10:15		104	122		22:15			154	60			
10:30		127	175		22:30			112	60			
10:45		138	498	181	22:45			72	484	71	265	749
11:00		134	177		23:00			66	66			
11:15		143	166		23:15			82	36			
11:30		146	199		23:30			44	36			
11:45		166	589	148	23:45			48	240	34	172	412

Total Vol.		EBT	STP	FFAB			EBT	STP	FFAB

Prepared by MDS&TD

Volume for: Thursday, March 25, 2010				City:	San Diego	Daily Totals				Total
Location: State St. between C St & Broadway				Project:	10-4100-010	NB	SB	EB	WB	1,221

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	10				12:00	48			
00:15	4				12:15	23			
00:30	9				12:30	56			
00:45	4	27			12:45	52	179		
01:00	6				13:00	56			
01:15	1				13:15	50			
01:30	1				13:30	42			
01:45	2	10			13:45	44	192		
02:00	4				14:00	45			
02:15	3				14:15	49			
02:30	3				14:30	43			
02:45	0	10			14:45	58	195		
03:00	2				15:00	46			
03:15	0				15:15	44			
03:30	0				15:30	40			
03:45	6	8			15:45	32	162		
04:00	1				16:00	36			
04:15	4				16:15	52			
04:30	3				16:30	42			
04:45	10	18			16:45	48	178		
05:00	9				17:00	61			
05:15	14				17:15	53			
05:30	11				17:30	48			
05:45	17	51			17:45	52	214		
06:00	13				18:00	38			
06:15	15				18:15	35			
06:30	44				18:30	44			
06:45	66	138			18:45	28	145		
07:00	69				19:00	39			
07:15	87				19:15	21			
07:30	91				19:30	25			
07:45	105	352			19:45	28	113		
08:00	96				20:00	37			
08:15	86				20:15	24			
08:30	67				20:30	27			
08:45	64	313			20:45	22	110		
09:00	68				21:00	26			
09:15	46				21:15	17			
09:30	63				21:30	24			
09:45	68	245			21:45	14	81		
10:00	42				22:00	22			
10:15	37				22:15	13			
10:30	44				22:30	17			
10:45	38	161			22:45	20	72		
11:00	47				23:00	22			
11:15	48				23:15	16			
11:30	49				23:30	12			
11:45	46	190			23:45	7	57		

Total Vol.	NB	SB	EB	WB	Total
1,221	1,221	0	0	0	1,221

Daily Totals:				Daily Totals:			
Split No.	Split	Split	Split	Split No.	Split	Split	Split
1	0.00	0.00	0.00	1	0.00	0.00	0.00
2	0.00	0.00	0.00	2	0.00	0.00	0.00
3	0.00	0.00	0.00	3	0.00	0.00	0.00
4	0.00	0.00	0.00	4	0.00	0.00	0.00
5	0.00	0.00	0.00	5	0.00	0.00	0.00
6	0.00	0.00	0.00	6	0.00	0.00	0.00
7	0.00	0.00	0.00	7	0.00	0.00	0.00
8	0.00	0.00	0.00	8	0.00	0.00	0.00
9	0.00	0.00	0.00	9	0.00	0.00	0.00
10	0.00	0.00	0.00	10	0.00	0.00	0.00
11	0.00	0.00	0.00	11	0.00	0.00	0.00
12	0.00	0.00	0.00	12	0.00	0.00	0.00
13	0.00	0.00	0.00	13	0.00	0.00	0.00
14	0.00	0.00	0.00	14	0.00	0.00	0.00
15	0.00	0.00	0.00	15	0.00	0.00	0.00
16	0.00	0.00	0.00	16	0.00	0.00	0.00
17	0.00	0.00	0.00	17	0.00	0.00	0.00
18	0.00	0.00	0.00	18	0.00	0.00	0.00
19	0.00	0.00	0.00	19	0.00	0.00	0.00
20	0.00	0.00	0.00	20	0.00	0.00	0.00
21	0.00	0.00	0.00	21	0.00	0.00	0.00
22	0.00	0.00	0.00	22	0.00	0.00	0.00
23	0.00	0.00	0.00	23	0.00	0.00	0.00
24	0.00	0.00	0.00	24	0.00	0.00	0.00
25	0.00	0.00	0.00	25	0.00	0.00	0.00
26	0.00	0.00	0.00	26	0.00	0.00	0.00
27	0.00	0.00	0.00	27	0.00	0.00	0.00
28	0.00	0.00	0.00	28	0.00	0.00	0.00
29	0.00	0.00	0.00	29	0.00	0.00	0.00
30	0.00	0.00	0.00	30	0.00	0.00	0.00
31	0.00	0.00	0.00	31	0.00	0.00	0.00
32	0.00	0.00	0.00	32	0.00	0.00	0.00
33	0.00	0.00	0.00	33	0.00	0.00	0.00
34	0.00	0.00	0.00	34	0.00	0.00	0.00
35	0.00	0.00	0.00	35	0.00	0.00	0.00
36	0.00	0.00	0.00	36	0.00	0.00	0.00
37	0.00	0.00	0.00	37	0.00	0.00	0.00
38	0.00	0.00	0.00	38	0.00	0.00	0.00
39	0.00	0.00	0.00	39	0.00	0.00	0.00
40	0.00	0.00	0.00	40	0.00	0.00	0.00
41	0.00	0.00	0.00	41	0.00	0.00	0.00
42	0.00	0.00	0.00	42	0.00	0.00	0.00
43	0.00	0.00	0.00	43	0.00	0.00	0.00
44	0.00	0.00	0.00	44	0.00	0.00	0.00
45	0.00	0.00	0.00	45	0.00	0.00	0.00
46	0.00	0.00	0.00	46	0.00	0.00	0.00
47	0.00	0.00	0.00	47	0.00	0.00	0.00
48	0.00	0.00	0.00	48	0.00	0.00	0.00
49	0.00	0.00	0.00	49	0.00	0.00	0.00
50	0.00	0.00	0.00	50	0.00	0.00	0.00
51	0.00	0.00	0.00	51	0.00	0.00	0.00
52	0.00	0.00	0.00	52	0.00	0.00	0.00
53	0.00	0.00	0.00	53	0.00	0.00	0.00
54	0.00	0.00	0.00	54	0.00	0.00	0.00
55	0.00	0.00	0.00	55	0.00	0.00	0.00
56	0.00	0.00	0.00	56	0.00	0.00	0.00
57	0.00	0.00	0.00	57	0.00	0.00	0.00
58	0.00	0.00	0.00	58	0.00	0.00	0.00
59	0.00	0.00	0.00	59	0.00	0.00	0.00
60	0.00	0.00	0.00	60	0.00	0.00	0.00
61	0.00	0.00	0.00	61	0.00	0.00	0.00
62	0.00	0.00	0.00	62	0.00	0.00	0.00
63	0.00	0.00	0.00	63	0.00	0.00	0.00
64	0.00	0.00	0.00	64	0.00	0.00	0.00
65	0.00	0.00	0.00	65	0.00	0.00	0.00
66	0.00	0.00	0.00	66	0.00	0.00	0.00
67	0.00	0.00	0.00	67	0.00	0.00	0.00
68	0.00	0.00	0.00	68	0.00	0.00	0.00
69	0.00	0.00	0.00	69	0.00	0.00	0.00
70	0.00	0.00	0.00	70	0.00	0.00	0.00
71	0.00	0.00	0.00	71	0.00	0.00	0.00
72	0.00	0.00	0.00	72	0.00	0.00	0.00
73	0.00	0.00	0.00	73	0.00	0.00	0.00
74	0.00	0.00	0.00	74	0.00	0.00	0.00
75	0.00	0.00	0.00	75	0.00	0.00	0.00
76	0.00	0.00	0.00	76	0.00	0.00	0.00
77	0.00	0.00	0.00	77	0.00	0.00	0.00
78	0.00	0.00	0.00	78	0.00	0.00	0.00
79	0.00	0.00	0.00	79	0.00	0.00	0.00
80	0.00	0.00	0.00	80	0.00	0.00	0.00
81	0.00	0.00	0.00	81	0.00	0.00	0.00
82	0.00	0.00	0.00	82	0.00	0.00	0.00
83	0.00	0.00	0.00	83	0.00	0.00	0.00
84	0.00	0.00	0.00	84	0.00	0.00	0.00
85	0.00	0.00	0.00	85	0.00	0.00	0.00
86	0.00	0.00	0.00	86	0.00	0.00	0.00
87	0.00	0.00	0.00	87	0.00	0.00	0.00
88	0.00	0.00	0.00	88	0.00	0.00	0.00
89	0.00	0.00	0.00	89	0.00	0.00	0.00
90	0.00	0.00	0.00	90	0.00	0.00	0.00
91	0.00	0.00	0.00	91	0.00	0.00	0.00
92	0.00	0.00	0.00	92	0.00	0.00	0.00
93	0.00	0.00	0.00	93	0.00	0.00	0.00
94	0.00	0.00	0.00	94	0.00	0.00	0.00
95	0.00	0.00	0.00	95	0.00	0.00	0.00
96	0.00	0.00	0.00	96	0.00	0.00	0.00
97	0.00	0.00	0.00	97	0.00	0.00	0.00
98	0.00	0.00	0.00	98	0.00	0.00	0.00
99	0.00	0.00	0.00	99	0.00	0.00	0.00
100	0.00	0.00	0.00	100	0.00	0.00	0.00

Prepared by NDC/ATD

Volumes for: Thursday, March 25, 2010				City:	San Diego	Daily Totals				Total
Location: Front St. between Ash St & A St				Project:	10-4105-D05	NB	SB	EB	WB	16,025
AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB	
00:00		34			12:00		225			
00:15		26			12:15		238			
00:30		24			12:30		265			
00:45		13	97		12:45		226	954		954
01:00		10			13:00		237			
01:15		14			13:15		263			
01:30		9			13:30		235			
01:45		16	49		13:45		254	989		989
02:00		10			14:00		209			
02:15		7			14:15		217			
02:30		8			14:30		244			
02:45		10	35		14:45		247	917		917
03:00		5			15:00		238			
03:15		4			15:15		231			
03:30		7			15:30		211			
03:45		13	29		15:45		206	886		886
04:00		12			16:00		220			
04:15		23			16:15		200			
04:30		34			16:30		216			
04:45		41	110		16:45		233	869		869
05:00		37			17:00		271			
05:15		50			17:15		275			
05:30		73			17:30		261			
05:45		105	265		17:45		259	1066		1066
06:00		97			18:00		229			
06:15		106			18:15		242			
06:30		154			18:30		221			
06:45		219	576		18:45		194	886		886
07:00		235			19:00		189			
07:15		306			19:15		177			
07:30		384			19:30		172			
07:45		405	1330		19:45		133	671		671
08:00		401			20:00		144			
08:15		430			20:15		137			
08:30		391			20:30		114			
08:45		389	1611		20:45		114	509		509
09:00		329			21:00		123			
09:15		332			21:15		132			
09:30		310			21:30		119			
09:45		291	1262		21:45		108	482		482
10:00		235			22:00		99			
10:15		243			22:15		96			
10:30		234			22:30		91			
10:45		231	943		22:45		81	367		367
11:00		216			23:00		52			
11:15		206			23:15		49			
11:30		265			23:30		34			
11:45		256	943		23:45		44	179		179

Total Vol		150	1500	1500	1500	1500	1500	1500	1500	1500
Daily Totals:		NB	SB	EB	WB	Total				
		0	16,025	0	0	16,025				
Split %		AM		PM		Total				
Peak Hr.	Vol	27.45	27.45	Peak Hr.	Vol	27.45	27.45			
Volume	100%	100%	100%	Volume	100%	100%	100%			
P.H.T.	1.00%	0.24%	0.24%	P.H.T.	1.00%	0.24%	0.24%			
P - 3 Vol	241	241	241	P - 3 Vol	241	241	241			
Peak Hr.	17:45	27.45	27.45	Peak Hr.	17:45	27.45	27.45			
Volume	100%	100%	100%	Volume	100%	100%	100%			
P.H.T.	1.00%	0.24%	0.24%	P.H.T.	1.00%	0.24%	0.24%			

Prepared by HD&WD

Volumes for Thursday, March 25, 2010				City: San Diego		Daily Totals				Total
Location: Front St. between A St & B St				Project: 10-4100-006		NB	SB	EB	WB	
						0	14,532	0	0	14,532
AM Period		SB	EB	WB	PM Period		SB	EB	WB	
00:00		32			12:00		203			
00:15		22			12:15		206			
00:30		21			12:30		239			
00:45		13	88		12:45		216	864		864
01:00		9			13:00		220			
01:15		10			13:15		231			
01:30		10			13:30		210			
01:45		11	40		13:45		237	898		898
02:00		6			14:00		195			
02:15		6			14:15		223			
02:30		6			14:30		221			
02:45		10	28		14:45		239	878		878
03:00		4			15:00		211			
03:15		5			15:15		204			
03:30		8			15:30		193			
03:45		10	27		15:45		174	782		782
04:00		12			16:00		190			
04:15		19			16:15		179			
04:30		30			16:30		214			
04:45		41	102		16:45		218	801		801
05:00		30			17:00		217			
05:15		52			17:15		242			
05:30		63			17:30		216			
05:45		94	239		17:45		227	902		902
06:00		77			18:00		203			
06:15		92			18:15		214			
06:30		144			18:30		190			
06:45		235	548		18:45		172	779		779
07:00		198			19:00		164			
07:15		286			19:15		164			
07:30		352			19:30		161			
07:45		368	1204		19:45		134	623		623
08:00		360			20:00		130			
08:15		379			20:15		143			
08:30		374			20:30		98			
08:45		365	1478		20:45		106	477		477
09:00		304			21:00		111			
09:15		298			21:15		116			
09:30		275			21:30		121			
09:45		255	1132		21:45		99	447		447
10:00		212			22:00		93			
10:15		212			22:15		90			
10:30		212			22:30		78			
10:45		219	855		22:45		63	324		324
11:00		194			23:00		44			
11:15		199			23:15		48			
11:30		244			23:30		35			
11:45		219	856		23:45		33	160		160

Total Vol.		CONF		CONF		CONF		CONF	

Prepared by MTC/ATP

Volumes for: Thursday, March 25, 2010				City: San Diego	Daily Totals				Total
Location: 1st Ave. between Ash St & A St				Project: 10-1108-017	NB	SB	EB	WB	Total
					19,860	0	0	0	19,860

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	64				12:00	297			
00:15	44				12:15	293			
00:30	50				12:30	295			
00:45	50	208		208	12:45	275	1160		1160
01:00	44				13:00	262			
01:15	29				13:15	295			
01:30	28				13:30	293			
01:45	52	153		153	13:45	307	1157		1157
02:00	26				14:00	323			
02:15	32				14:15	334			
02:30	28				14:30	334			
02:45	12	98		98	14:45	335	1326		1326
03:00	13				15:00	395			
03:15	11				15:15	347			
03:30	12				15:30	359			
03:45	6	42		42	15:45	351	1452		1452
04:00	19				16:00	418			
04:15	14				16:15	410			
04:30	14				16:30	415			
04:45	30	77		77	16:45	444	1687		1687
05:00	40				17:00	461			
05:15	38				17:15	469			
05:30	44				17:30	477			
05:45	64	186		186	17:45	453	1860		1860
06:00	70				18:00	380			
06:15	98				18:15	365			
06:30	152				18:30	315			
06:45	141	461		461	18:45	279	1339		1339
07:00	160				19:00	278			
07:15	179				19:15	260			
07:30	228				19:30	213			
07:45	267	834		834	19:45	206	957		957
08:00	251				20:00	249			
08:15	244				20:15	218			
08:30	239				20:30	209			
08:45	245	979		979	20:45	190	866		866
09:00	242				21:00	184			
09:15	224				21:15	211			
09:30	231				21:30	198			
09:45	246	943		943	21:45	197	790		790
10:00	222				22:00	201			
10:15	258				22:15	187			
10:30	262				22:30	160			
10:45	235	977		977	22:45	149	697		697
11:00	242				23:00	143			
11:15	275				23:15	114			
11:30	299				23:30	133			
11:45	324	1140		1140	23:45	81	471		471

Total Vol.	15767	15767	15767	15767
Daily Totals:				Total
NB	SB	EB	WB	19,860

AM				PM
Sp. Freq.	Vol.	Sp. Freq.	Vol.	Sp. Freq.
Peak Hr.	11:30	Peak Hr.	17:45	Peak Hr.
Volumes	1217	Volumes	1042	Volumes
P.H.F.	0.225	P.H.F.	0.225	P.H.F.
7 - 9 Vol.	1071	4 - 6 Vol.	297	7 - 9 Vol.
Peak Hr.	07:45	Peak Hr.	17:45	Peak Hr.
Volumes	1201	Volumes	1042	Volumes
P.H.F.	0.227	P.H.F.	0.227	P.H.F.

Prepared by NDS/WED

Volumetric for Thursday, March 25, 2010				City	San Diego	Daily Totals				Total
Location: 1st Ave. Between A St & B St				Project	10-4100-DWB	NB	SB	EB	WB	Total
						15,549	0	0	0	15,549
AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB	
00:00	64				12:00	216				
00:15	33				12:15	229				
00:30	39				12:30	197				
00:45	51	187			12:45	226	868			868
01:00	46				13:00	204				
01:15	23				13:15	260				
01:30	26				13:30	251				
01:45	42	137			13:45	234	949			949
02:00	23				14:00	261				
02:15	16				14:15	259				
02:30	16				14:30	283				
02:45	12	67			14:45	267	1070			1070
03:00	9				15:00	295				
03:15	15				15:15	277				
03:30	14				15:30	272				
03:45	4	42			15:45	256	1100			1100
04:00	19				16:00	313				
04:15	13				16:15	304				
04:30	11				16:30	303				
04:45	26	69			16:45	353	1273			1273
05:00	39				17:00	384				
05:15	47				17:15	356				
05:30	41				17:30	354				
05:45	64	191			17:45	341	1435			1435
06:00	67				18:00	275				
06:15	84				18:15	248				
06:30	104				18:30	227				
06:45	120	375			18:45	245	995			995
07:00	140				19:00	215				
07:15	166				19:15	202				
07:30	186				19:30	173				
07:45	252	744			19:45	166	756			756
08:00	194				20:00	219				
08:15	211				20:15	187				
08:30	188				20:30	165				
08:45	199	792			20:45	151	722			722
09:00	193				21:00	157				
09:15	185				21:15	167				
09:30	187				21:30	167				
09:45	197	762			21:45	164	655			655
10:00	190				22:00	146				
10:15	211				22:15	138				
10:30	234				22:30	157				
10:45	206	841			22:45	131	572			572
11:00	192				23:00	101				
11:15	212				23:15	79				
11:30	240				23:30	95				
11:45	252	896			23:45	76	351			351

Total Vol.				Daily Totals				Total
				NB	SB	EB	WB	Total
				15,549	0	0	0	15,549
AM				PM				
Start No	End No	Start No	End No	Start No	End No	Start No	End No	
AM		PM						
Peak Hr.	11:15	Peak Hr.	11:15	Peak Hr.	11:15	Peak Hr.	11:15	
Volume	717	Volume	717	Volume	717	Volume	717	
P.H.F.	0.000	P.H.F.	0.000	P.H.F.	0.000	P.H.F.	0.000	
P. Peak	11:15	P. Peak	11:15	P. Peak	11:15	P. Peak	11:15	
Peak Hr.	11:15	Peak Hr.	11:15	Peak Hr.	11:15	Peak Hr.	11:15	
Volume	717	Volume	717	Volume	717	Volume	717	
P.H.F.	0.000	P.H.F.	0.000	P.H.F.	0.000	P.H.F.	0.000	

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2
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Volume for: Thursday, March 25, 2010					City: San Diego		Daily Totals				
					NB	SB	EB	WB	Total		
Location: 1st Ave. between C St & Broadway					Project	10-1102-009	14,044	0	0	0	14,044
AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB		
00:00	51				12:00	191					
00:15	37				12:15	203					
00:30	44				12:30	187					
00:45	45	177			12:45	221	802			802	
01:00	37				13:00	179					
01:15	22				13:15	211					
01:30	18				13:30	220					
01:45	32	109			13:45	197	807			807	
02:00	23				14:00	225					
02:15	9				14:15	237					
02:30	15				14:30	256					
02:45	7	54			14:45	211	929			929	
03:00	11				15:00	256					
03:15	13				15:15	229					
03:30	10				15:30	241					
03:45	6	40			15:45	226	952			952	
04:00	15				16:00	260					
04:15	13				16:15	256					
04:30	11				16:30	234					
04:45	21	60			16:45	271	1021			1021	
05:00	26				17:00	274					
05:15	37				17:15	246					
05:30	36				17:30	289					
05:45	67	166			17:45	274	1083			1083	
06:00	57				18:00	243					
06:15	87				18:15	218					
06:30	82				18:30	201					
06:45	118	344			18:45	216	878			878	
07:00	139				19:00	197					
07:15	161				19:15	189					
07:30	198				19:30	170					
07:45	252	750			19:45	148	704			704	
08:00	209				20:00	198					
08:15	205				20:15	152					
08:30	197				20:30	142					
08:45	192	803			20:45	141	633			633	
09:00	205				21:00	148					
09:15	181				21:15	161					
09:30	176				21:30	158					
09:45	188	750			21:45	157	624			624	
10:00	175				22:00	135					
10:15	183				22:15	117					
10:30	201				22:30	122					
10:45	186	745			22:45	131	505			505	
11:00	178				23:00	98					
11:15	193				23:15	72					
11:30	197				23:30	88					
11:45	209	777			23:45	73	331			331	

[illegible]

APPENDIX B

Existing Conditions HCM Worksheets

EX AM Wed May 12, 2010 10:45:47 Page 1-1

Existing Conditions
AM Peak
SD Courthouse

Scenario Report

Scenario: EX AM

Command: ex-am
Volume: ex-am
Geometry: ex
Impact Fee: Default Impact Fee
Trip Generation: none
Trip Distribution: none
Paths: Default Path
Routes: Default Route
Configuration: ex-am

EX AM Wed May 12, 2010 10:46:48 Page 2-1

Existing Conditions
AM Peak
SD Courthouse
-----Impact Analysis Report
Level Of Service

Intersection	Base Del/Veh LOS	V/C	Future Del/Veh LOS	V/C	Change in
#101 Ash / Union	A 6.2	0.415	A 6.4	0.453	+ 0.164 D/V
#102 Ash / Front	B 19.9	0.596	C 20.6	0.633	+ 0.691 D/V
#103 1st / A	B 17.2	0.337	B 17.3	0.343	+ 0.082 D/V
#104 B / State	A 9.3	0.397	A 10.0	0.474	+ 0.077 V/C
#105 B / Union	B 10.3	0.452	B 11.6	0.548	+ 0.095 V/C
#106 B / Front	A 6.1	0.389	A 6.1	0.401	-0.038 D/V
#107 C / State	B 10.9	0.000	C 18.4	0.000	+ 7.550 D/V
#108 C / Union	B 10.5	0.000	B 10.8	0.000	+ 0.331 D/V
#109 Broadway / State	A 0.0	0.259	A 0.0	0.274	+ 0.004 D/V
#110 Broadway / Union	A 8.5	0.395	A 9.5	0.416	+ 1.026 D/V

EX AM Wed May 12, 2010 10:46:48 Page 5-1

Existing Conditions
AM Peak
SD CourthouseLevel Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 1st / A

Cycle (sec): 110 Critical Vol./Cap.(X): 0.337
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 17.2
Optimal Cycle: 34 Level Of Service: B

Street Name: 1st St. A St.

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected Protected Protected
Rights: Include Include Include Include Include IncludeMin. Green: 0 10 10 0 0 0 0 0 7 10 0 0 0 0 0 0 0 0
Lanes: 0 0 2 1 1 0 0 0 0 0 0 0 1 2 0 0 0 0 0 0 0 0

Volume Module:

Base Vol:	0	669	138	0	0	0	304	323	0	0	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	669	138	0	0	0	304	323	0	0	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	0	700	144	0	0	0	318	338	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	700	144	0	0	0	318	338	0	0	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
M/F Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	700	144	0	0	0	318	338	0	0	0	0	0	0	0	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.89	0.89	1.00	1.00	1.00	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	3.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	5052	1684	0	0	0	1603	3206	0	0	0	0	0	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.14	0.09	0.00	0.00	0.00	0.20	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Green Time:	0.0	45.2	45.2	0.0	0.0	0.0	64.8	64.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Volume/Cap:	0.00	0.34	0.21	0.00	0.00	0.00	0.34	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	0.0	22.2	20.9	0.0	0.0	0.0	11.7	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	22.2	20.9	0.0	0.0	0.0	11.7	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	A	C	C	A	A	A	B	B	A	A	A	A	A	A	A	A
HCM2kAVGQ:	0	6	3	0	0	0	6	3	0	0	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

EX AM Wed May 12, 2010 10:46:48 Page 6-1

Existing Conditions
AM Peak
SD CourthouseLevel Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #104 B / State

Cycle (sec): 100 Critical Vol./Cap.(X): 0.397
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 9.3
Optimal Cycle: 0 Level Of Service: A

Street Name: State St. B St.

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include IncludeMin. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 1 1 1 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0

Volume Module:

Base Vol:	34	110	36	0	0	0	75	35	0	0	153	171
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	34	110	36	0	0	0	75	35	0	0	153	171
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	35	113	37	0	0	0	77	36	0	0	157	176
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	113	37	0	0	0	77	36	0	0	157	176
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
M/F Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	35	113	37	0	0	0	77	36	0	0	157	176

Saturation Flow Module:

Sat/Lane:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.57	1.83	0.60	0.00	0.00	0.00	0.68	0.32	0.00	0.00	0.47	0.53
Final Sat.:	340	1159	407	0	0	0	489	228	0	0	397	444

Capacity Analysis Module:

Vol/Sat:	0.10	0.10	0.09	xxxx	xxxx	xxxx	0.16	0.16	xxxx	xxxx	0.40	0.40
Crit Moves:	***	***	***	***	***	***	***	***	***	***	***	***
Delay/Veh:	9.0	8.7	8.2	0.0	0.0	0.0	8.7	8.7	0.0	0.0	9.8	9.8
AdjDel/Veh:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LOS by Move:	A	A	A	*	*	*	A	A	*	*	A	A
ApproachDel:	8.6	8.6	8.6	xxxxxx	xxxxxx	xxxxxx	8.7	8.7	1.00	1.00	9.8	9.8
Delay Adj:	1.00	1.00	1.00	xxxxxx	xxxxxx	xxxxxx	1.00	1.00	xxxxxx	xxxxxx	1.00	1.00
ApprAdjDel:	8.6	8.6	8.6	xxxxxx	xxxxxx	xxxxxx	8.7	8.7	A	A	A	A
LOS by Appr:	A	A	A	*	*	*	A	A	*	*	A	A
AllwayAVGQ:	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.6	0.6

Note: Queue reported is the number of cars per lane.

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Existing Conditions
AM Peak
SD Courthouse

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)
Intersection #105 B / Union

Cycle (sec): 100 Critical Vol./Cap.(X): 0.452
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.3
Optimal Cycle: 0 Level Of Service: B

Street Name: Union St. B St.
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0 0

Volume Module:

Base Vol: 23 88 18 8 122 79 7 44 23 35 229 48
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 23 88 18 8 122 79 7 44 23 35 229 48
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96
PHF Volume: 24 92 19 8 127 82 7 46 24 37 239 50
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 24 92 19 8 127 82 7 46 24 37 239 50
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MUF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 24 92 19 8 127 82 7 46 24 37 239 50

Saturation Flow Module:
Sat/Lane: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.18 0.68 0.14 0.04 0.58 0.38 0.09 0.60 0.31 0.11 0.74 0.15
Final Sat.: 116 446 91 27 407 264 62 391 204 81 528 111

Capacity Analysis Module:

Vol/Sat: 0.21 0.21 0.21 0.31 0.31 0.31 0.12 0.12 0.12 0.12 0.45 0.45
Crit Moves: ****
Delay/Veh: 9.3 9.3 9.3 9.8 9.8 9.8 8.6 8.6 8.6 11.4 11.4 11.4
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 9.3 9.3 9.3 9.8 9.8 9.8 8.6 8.6 8.6 11.4 11.4 11.4
LOS by Move: A A A A A A A A A B B
ApproachDel: 9.3 9.3 9.8 8.6 8.6 11.4
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00
ApprAdjDel: 9.3 9.8 8.6 11.4
LOS by Appr: A A A A A B
AllwayAVGQ: 0.2 0.2 0.2 0.4 0.4 0.4 0.1 0.1 0.1 0.7 0.7 0.7

Note: Queue reported is the number of cars per lane.

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Existing Conditions
AM Peak
SD Courthouse

Level of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)
Intersection #106 B / Front

Cycle (sec): 110 Critical Vol./Cap.(X): 0.389
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 6.1
Optimal Cycle: 30 Level Of Service: A

Street Name: Front St. B St.
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 0 1 1 0 0 0 0 1 0 0 0

Volume Module:

Base Vol: 0 0 0 40 1240 245 0 43 25 32 69 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 40 1240 245 0 43 25 32 69 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 0 0 0 43 1341 265 0 46 27 35 75 0
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 43 1341 265 0 46 27 35 75 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MUF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 43 1341 265 0 46 27 35 75 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.88 0.88 0.88 1.00 0.95 0.95 0.92 0.92 1.00
Lanes: 0.00 0.00 0.00 0.08 2.44 0.48 0.00 0.63 0.37 0.32 0.68 0.00
Final Sat.: 0 0 0 132 4100 810 0 1141 664 554 1195 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.33 0.33 0.33 0.00 0.04 0.04 0.06 0.06 0.00
Crit Moves: ****
Green Time: 0.0 0.0 0.0 92.4 92.4 92.4 0.0 17.6 17.6 17.6 17.6 0.0
Volume/Cap: 0.00 0.00 0.00 0.39 0.39 0.39 0.00 0.25 0.25 0.39 0.39 0.00
Delay/Veh: 0.0 0.0 0.0 2.2 2.2 2.2 0.0 40.9 40.9 42.3 42.3 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 2.2 2.2 2.2 0.0 40.9 40.9 42.3 42.3 0.0
LOS by Move: A A A A A A A D D D A
HCM2kAVGQ: 0 0 0 5 5 5 0 2 2 4 4 0

Note: Queue reported is the number of cars per lane.

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EX AM Wed May 12, 2010 10:46:48 Page 9-1

Existing Conditions
AM Peak
SD Courthouse

Level of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #107 C / State

Average Delay (sec/veh): 10.0 Worst Case Level of Service: B [10.9]

Street Name: State St. C St.

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 2 1 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0

Volume Module:

Base Vol: 0 238 14 0 0 0 0 34 19 0 0 0 0 0 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 238 14 0 0 0 0 34 19 0 0 0 0 0 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88

PHF Volume: 0 272 16 0 0 0 0 39 22 0 0 0 0 0 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Final Volume: 0 272 16 0 0 0 0 39 22 0 0 0 0 0 0 0 0

Critical Gap Module:

Critical Gap: 6.5 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2

FollowUp: 4.0 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3

Capacity Module:

Conflict Vol: 99 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11

Potent Cap: 99 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11

Move Cap: 99 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11

Volume/Cap: 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01

Level of Service Module:

2Way95thQ: 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9

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Existing Conditions
AM Peak
SD Courthouse

Level of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #108 C / Union

Average Delay (sec/veh): 9.6 Worst Case Level of Service: B [10.5]

Street Name: Union St. C St.

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 1 0 0 1 0 0 0 0 1 0 1 0 0 0 0 0 0

Volume Module:

Base Vol: 0 159 40 13 153 0 2 20 11 0 0 0 0 0 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 159 40 13 153 0 2 20 11 0 0 0 0 0 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91

PHF Volume: 0 176 44 14 169 0 2 22 12 0 0 0 0 0 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Final Volume: 0 176 44 14 169 0 2 22 12 0 0 0 0 0 0 0 0

Critical Gap Module:

Critical Gap: 6.5 6.2 7.1 6.5 6.5 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1

FollowUp: 4.0 3.3 3.5 4.0 4.0 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2

Capacity Module:

Conflict Vol: 33 17 103 39 39 0 0 0 0 0 0 0 0 0 0 0 0

Potent Cap: 33 17 103 39 39 0 0 0 0 0 0 0 0 0 0 0 0

Move Cap: 33 17 103 39 39 0 0 0 0 0 0 0 0 0 0 0 0

Volume/Cap: 0.02 0.02 0.04 0.02 0.02 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Level of Service Module:

2Way95thQ: 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9

Existing Conditions
AM Peak
SD Courthouse

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)
Intersection #109 Broadway / State

Cycle (sec): 110 Critical Vol./Cap.(X): 0.259
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 0.0
Optimal Cycle: 25 Level Of Service: A

Street Name: State St. Broadway
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted Permitted
Rights: Include Include Include Include Include

Min. Green: 7 10 10 0 0 0 0 7 10 0 0 10 10
Lanes: 0 0 1 0 0 0 0 0 0 0 0 1 0 1 0 1 0

Volume Module:
Base Vol: 0 0 0 0 0 0 0 64 258 34 48 499 305
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 0 0 0 0 64 258 34 48 499 305
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 0 0 0 0 0 0 0 70 283 37 53 547 334
Reduced Vol: 0 0 0 0 0 0 0 70 283 37 53 547 334
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 0 0 0 0 0 0 0 70 283 37 53 547 334

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 1.00 0.00 0.00 0.00 0.00 0.00 1.00 1.77 0.23 1.00 1.24 0.76
Final Sat.: 0 1900 0 0 0 0 0 610 3135 413 1053 2113 1291

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.12 0.09 0.09 0.05 0.26 0.26
Crit Moves: ****
Green Time: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 110.0 110.0 110.0 110.0 110.0
Volume/Cap: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.12 0.09 0.09 0.05 0.26 0.26
Delay/Veh: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0
LOS by Move: A A A A A A A A A A A A A
HCM2XAVGQ: 0 0 0 0 0 0 0 0 0 0 0 0 0

Note: Queue reported is the number of cars per lane.

Existing Conditions
AM Peak
SD Courthouse

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)
Intersection #110 Broadway / Union

Cycle (sec): 110 Critical Vol./Cap.(X): 0.395
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 8.5
Optimal Cycle: 24 Level Of Service: A

Street Name: Union St. Broadway
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted
Rights: Include Include Include Include

Min. Green: 7 10 10 7 10 10 7 10 10 7 10 10
Lanes: 0 1 0 0 0 0 0 1 0 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 0 0 0 42 0 109 13 276 0 0 708 200
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 42 0 109 13 276 0 0 708 200
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90
PHF Volume: 0 0 0 47 0 121 14 307 0 0 788 222
Reduced Vol: 0 0 0 47 0 121 14 307 0 0 788 222
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 0 0 0 47 0 121 14 307 0 0 788 222

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 1.00 0.00 0.00 0.00 0.00 0.00 1.00 2.00 0.00 1.00 1.56 0.44
Final Sat.: 0 1900 0 443 0 1151 458 3610 0 1900 2722 769

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.11 0.00 0.11 0.03 0.09 0.00 0.00 0.29 0.29
Crit Moves: ****
Green Time: 0.0 0.0 0.0 29.4 0.0 29.4 80.6 80.6 0.0 0.0 80.6 80.6
Volume/Cap: 0.00 0.00 0.00 0.39 0.00 0.39 0.04 0.12 0.00 0.00 0.39 0.39
Delay/Veh: 0.0 0.0 0.0 33.6 0.0 33.6 4.1 4.3 0.0 0.0 5.6 5.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 33.6 0.0 33.6 4.1 4.3 0.0 0.0 5.6 5.6
LOS by Move: A A A C A C A A A A A A
HCM2XAVGQ: 0 0 0 5 0 5 0 2 0 0 7 7

Note: Queue reported is the number of cars per lane.

APPENDIX C

Existing Plus Project Conditions HCM Worksheets

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Existing Plus Project
AM Peak
SD Courthouse Project

Scenario Report

Scenario: EX+P AM

Command: ex+P

Volume: ex-am

Geometry: ex

Impact Fee: Default Impact Fee

Trip Generation: Proj

Trip Distribution: distribution

Paths: Default Path

Routes: Default Route

Configuration: ex+P

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Existing Plus Project
AM Peak
SD Courthouse Project-----
Trip Generation Report
With Project / Less MB/FL Trips
Forecast for am project

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips
1	Parking 1	34.00	Courthouse	0.84	0.16	29	5	34
1	Parking 1	180.00	MB/FL Reassign	0.90	0.10	162	18	180
	Zone 1 Subtotal					191	23	214
2	Parking 2	100.00	Trip Distribut	0.00	0.00	0	0	0
2	Parking 2	34.00	Courthouse	0.84	0.16	29	5	34
2	Parking 2	181.00	MB/FL Reassign	0.90	0.10	163	18	181
	Zone 2 Subtotal					192	23	215
5		-361.00	Madge Bradley	0.90	0.10	-325	-36	-361
5		219.00	New Office Use	0.90	0.10	197	22	219
	Zone 5 Subtotal					-128	-14	-142

TOTAL 255 32 287 100.0

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Existing Plus Project
AM Peak
SD Courthouse Project
Trip Distribution Report

Percent of Trips Project

Zone	1	2	3	4	5	6	7	10	11	13	16
	4.0	4.0	4.0	30.0	30.0	30.0	30.0	11.0	0.0	13.0	4.0
1	4.0	4.0	4.0	30.0	30.0	30.0	30.0	11.0	0.0	13.0	4.0
2	4.0	4.0	4.0	30.0	30.0	30.0	30.0	11.0	0.0	13.0	4.0
5	4.0	0.0	4.0	30.0	0.0	30.0	0.0	11.0	0.0	13.0	4.0

To Gates

18 19 20

1	0.0	4.0	4.0
2	0.0	4.0	4.0
5	0.0	4.0	0.0

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Existing Plus Project
AM Peak
SD Courthouse Project
Turning Movement Report
am project

Volume Type	Northbound Left Thru Right	Southbound Left Thru Right	Eastbound Left Thru Right	Westbound Left Thru Right	Total Volume
#101 Ash / Union					
Base	15 35	0 102 29	0 0	0 207 1444	70 1902
Added	2 2	0 10 0	0 0	0 113 58	-1 184
Total	17 37	0 112 29	0 0	0 320 1502	69 2086
#102 Ash / Front					
Base	0 0	0 1102 332	0 0	0 485 1404	0 3323
Added	0 0	0 -10 86	0 0	0 27 84	0 187
Total	0 0	0 1092 418	0 0	0 512 1488	0 3510
#103 1st / A					
Base	0 669 138	0 0 0	0 304 323	0 0 0	0 1434
Added	0 3 -16	0 0 0	0 10 -60	0 0 0	0 -63
Total	0 672 122	0 0 0	0 314 263	0 0 0	0 1371
#104 B / State					
Base	34 110 36	0 0 0	0 75 35	0 0 153	171 614
Added	1 10 12	0 0 0	0 0 0	0 0 65	0 88
Total	35 120 48	0 0 0	0 75 35	0 0 218	171 702
#105 B / Union					
Base	23 88 18	8 122 79	7 44 23	35 229 48	724
Added	0 37 0	0 7 8	0 0 7	0 58 0	123
Total	23 125 18	8 129 87	7 51 29	35 287 48	847
#106 B / Front					
Base	0 0 0	0 40 1240	245 0 43	32 69 0	1694
Added	0 0 0	0 -2 58	0 7 0	0 0 0	63
Total	0 0 0	0 40 1238	303 0 50	32 69 0	1757
#107 C / State					
Base	0 238 14	0 0 0	0 34 19	0 0 0	305
Added	0 56 0	0 0 0	0 136 0	0 0 0	192
Total	0 294 14	0 0 0	0 170 19	0 0 0	497
#108 C / Union					
Base	0 159 40	13 153 0	2 20 11	0 0 0	398
Added	0 37 0	0 12 0	0 0 0	0 0 0	49
Total	0 196 40	13 165 0	2 20 11	0 0 0	447
#109 Broadway / State					
Base	0 0 0	0 0 0	64 258 34	48 499 305	1208
Added	0 0 0	0 0 0	8 3 0	0 0 48	59
Total	0 0 0	0 0 0	72 261 34	48 499 353	1267

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Existing Plus Project
AM Peak

SD Courthouse Project

Volume Northbound Southbound Eastbound Westbound Total
Type Left Thru Right Left Thru Right Left Thru Right Left Thru Right Volume#110 Broadway / Union
Base 0 0 0 42 0 109 13 276 0 0 708 200 1348
Added 25 8 0 5 4 3 8 -5 0 0 21 21 90
Total 25 8 0 47 4 112 21 271 0 0 729 221 1438

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Existing Plus Project
AM Peak

SD Courthouse Project

Impact Analysis Report
Level Of Service

Intersection	Base Del/ V/ LOS Veh C	Future Del/ V/ LOS Veh C	Change in
#101 Ash / Union	A 6.2 0.415	A 6.2 0.456	+ 0.036 D/V
#102 Ash / Front	B 19.9 0.596	C 20.6 0.631	+ 0.626 D/V
#103 1st / A	B 17.2 0.337	B 17.6 0.346	+ 0.408 D/V
#104 B / State	A 9.3 0.397	B 10.2 0.488	+ 0.092 V/C
#105 B / Union	B 10.3 0.452	B 11.8 0.560	+ 0.108 V/C
#106 B / Front	A 6.1 0.389	A 6.1 0.403	-0.016 D/V
#107 C / State	B 10.9 0.000	C 21.5 0.000	+10.604 D/V
#108 C / Union	B 10.5 0.000	B 10.7 0.000	+ 0.241 D/V
#109 Broadway / State	A 0.0 0.259	A 0.0 0.276	+ 0.004 D/V
#110 Broadway / Union	A 8.5 0.395	A 9.4 0.418	+ 0.921 D/V

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Existing Plus Project
AM Peak
SD Courthouse Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #101 Ash / Union
Cycle (sec): 110 Critical Vol./Cap.(X): 0.456
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 6.2
Optimal Cycle: 26 Level Of Service: A

Street Name: Union St. Ash St.
Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted
Rights: Include Include Include Include

Min. Green: 7 10 0 0 10 10 0 0 0 0 0 7 10 10
Lanes: 0 1 0 0 0 0 0 0 1 0 0 0 0 1 1 0

Volume Module:

Base Vol: 15 35 0 0 102 29 0 0 0 207 1444 70
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 15 35 0 0 102 29 0 0 0 207 1444 70
Added Vol: 2 2 0 0 10 0 0 0 113 58 -1

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 17 37 0 0 112 29 0 0 0 320 1502 69

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99

PHF Volume: 17 37 0 0 113 29 0 0 0 323 1516 70
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 17 37 0 0 113 29 0 0 0 323 1516 70
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 17 37 0 0 113 29 0 0 0 323 1516 70

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 1.00 1.00 0.97 0.97 1.00 1.00 1.00 0.88 0.88 0.88

Lanes: 0.31 0.69 0.00 0.00 0.79 0.21 0.00 0.00 0.00 0.51 2.38 0.11
Final Sat.: 566 1232 0 0 1467 380 0 0 852 3997 184

Capacity Analysis Module:

Vol/Sat: 0.03 0.03 0.00 0.00 0.08 0.08 0.00 0.00 0.00 0.38 0.38 0.38
Crit Moves: 0.03 0.03 0.00 0.00 0.08 0.08 0.00 0.00 0.00 0.38 0.38 0.38

Green Time: 18.6 18.6 0.0 0.0 18.6 18.6 0.0 0.0 0.0 91.4 91.4
Volume/Cap: 0.18 0.18 0.00 0.00 0.46 0.46 0.00 0.00 0.00 0.46 0.46

Delay/Veh: 39.5 39.5 0.0 0.0 42.2 42.2 0.0 0.0 0.0 2.6 2.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 39.5 39.5 0.0 0.0 42.2 42.2 0.0 0.0 0.0 2.6 2.6
LOS by Move: D D A A D D A A A A A A

HCM2AVGO: 2 2 0 0 5 5 0 0 0 7 7
Note: Queue reported is the number of cars per lane.

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Existing Plus Project
AM Peak
SD Courthouse Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #102 Ash / Front
Cycle (sec): 110 Critical Vol./Cap.(X): 0.631
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 20.6
Optimal Cycle: 62 Level Of Service: C

Street Name: Front St. Ash St.
Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 10 10 0 0 0 0 0 7 10 0
Lanes: 0 0 0 0 0 0 2 1 0 0 0 0 0 1 2 0

Volume Module:

Base Vol: 0 0 0 0 1102 332 0 0 485 1404 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 0 1102 332 0 0 485 1404 0
Added Vol: 0 0 0 0 -10 86 0 0 0 27 84

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 1092 418 0 0 512 1488 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96

PHF Volume: 0 0 0 0 1140 436 0 0 534 1553 0
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 1140 436 0 0 534 1553 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 0 1140 436 0 0 534 1553 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 1.00 0.87 0.87 1.00 1.00 1.00 0.88 0.88

Lanes: 0.00 0.00 0.00 0.00 2.17 0.83 0.00 0.00 0.00 1.02 2.98
Final Sat.: 0 0 0 0 3594 1376 0 0 1703 4950 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.32 0.32 0.00 0.00 0.00 0.31 0.31
Crit Moves: 0.00 0.00 0.00 0.00 55.3 55.3 0.0 0.0 0.0 54.7 54.7

Green Time: 0.0 0.0 0.0 0.0 55.3 55.3 0.0 0.0 0.0 54.7 54.7
Volume/Cap: 0.00 0.00 0.00 0.00 0.63 0.63 0.00 0.00 0.00 0.63 0.63

Delay/Veh: 0.0 0.0 0.0 0.0 20.4 20.4 0.0 0.0 0.0 20.7 20.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 0.0 0.0 0.0 20.4 20.4 0.0 0.0 0.0 20.7 20.7
LOS by Move: A A A A C A C A C A

HCM2AVGO: 0 0 0 0 14 14 0 0 0 14 14
Note: Queue reported is the number of cars per lane.

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EX+P AM

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Existing Plus Project
AM Peak
SD Courthouse Project

Note: Queue reported is the number of cars per lane.

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #105 B / Union

Cycle (sec): 100 Critical Vol./Cap.(X): 0.560

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.8

Optimal Cycle: 0 Level Of Service: B

Street Name: Union St. B St.

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0 0

Volume Module:

Base Vol: 23 88 18 8 122 79 7 44 23 35 229 48

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 23 88 18 8 122 79 7 44 23 35 229 48

Added Vol: 0 37 0 0 7 8 0 7 6 0 58 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 23 125 18 8 129 87 7 51 29 35 287 48

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96

PHF Volume: 24 130 19 8 135 91 7 53 30 37 300 50

Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 24 130 19 8 135 91 7 53 30 37 300 50

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Volume: 24 130 19 8 135 91 7 53 30 37 300 50

Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.14 0.75 0.11 0.03 0.58 0.39 0.08 0.59 0.33 0.09 0.78 0.13

Final Sat.: 85 463 67 23 376 253 49 358 204 65 535 89

Capacity Analysis Module:

Vol/Sat: 0.28 0.28 0.28 0.36 0.36 0.15 0.15 0.15 0.56 0.56 0.56

Crit Moves: ****

Delay/Veh: 10.3 10.3 10.3 10.7 10.7 10.7 9.1 9.1 9.1 13.7 13.7

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 10.3 10.3 10.3 10.7 10.7 10.7 9.1 9.1 9.1 13.7 13.7

LOS by Move: B B B B B A A A A B B

ApproachDel: 10.3 10.7 10.7 9.1 9.1 9.1 13.7 13.7

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

ApproachDel: 10.3 10.7 10.7 9.1 9.1 9.1 13.7 13.7

LOS by Appr: B B B A A A 1.1 1.1 1.1 1.1

AllWayAVGQ: 0.3 0.3 0.3 0.5 0.5 0.5 0.1 0.1 0.1 1.1 1.1

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EX+P AM

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Existing Plus Project
AM Peak
SD Courthouse Project

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Existing Plus Project
AM Peak
SD Courthouse Project

Note: Queue reported is the number of cars per lane.

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Existing Plus Project
AM Peak
SD Courthouse ProjectLevel Of Service Computation Report
Operations Method (Future Volume Alternative)

Intersection #105 B / Front

Cycle (sec): 110 Critical Vol./Cap.(X): 0.403

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 6.1

Optimal Cycle: 31 Level Of Service: A

Street Name: Front St. B St.

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted Permitted Permitted Permitted

Rights: Include Include Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 7 10 10 0 0 10 10 7 10 0

Lanes: 0 0 0 0 0 0 1 1 0 0 0 0 1 0 0

Volume Module:

Base Vol: 0 0 0 0 0 40 1240 245 0 43 25 32 69 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 0 0 40 1240 245 0 43 25 32 69 0

Added Vol: 0 0 0 0 0 -2 58 0 7 0 0 0 0

PasserbyVol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 0 0 40 1238 303 0 50 25 32 69 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93

PHF Volume: 0 0 0 0 0 43 1338 328 0 54 27 35 75 0

Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 43 1338 328 0 54 27 35 75 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 43 1338 328 0 54 27 35 75 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 1.00 1.00 1.00 1.00 0.88 0.88 0.96 0.96 0.93 0.93 1.00

Lanes: 0.00 0.00 0.00 0.08 2.35 0.57 0.00 0.67 0.33 0.32 0.68 0.00

Final Sat.: 0 0 0 127 3928 961 0 1210 605 558 1203 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.34 0.34 0.34 0.00 0.04 0.04 0.06 0.06 0.00

Crit Moves: 93.1 93.1 93.1 93.1 93.1 93.1 93.1 93.1 93.1 93.1 93.1

Green Time: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Volume/Cap: 0.00 0.00 0.00 0.40 0.40 0.40 0.00 0.29 0.29 0.40 0.40

Delay/Veh: 0.0 0.0 0.0 2.0 2.0 2.0 0.0 41.8 41.8 43.0 43.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 0.0 0.0 2.0 2.0 2.0 0.0 41.8 41.8 43.0 43.0

LOS by Move: A A A A A A A A A A A A

HCM2kAVSQ: 0 0 0 5 5 5 0 3 3 4 4 0

Note: Queue reported is the number of cars per lane.

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Existing Plus Project
AM Peak
SD Courthouse Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
Intersection #109 Broadway / State
Cycle (sec): 110 Critical Vol./Cap.(X): 0.276
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 0.0
Optimal Cycle: 26 Level Of Service: A

Street Name: State St. Broadway
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include

Min. Green: 7 10 10 0 0 0 0 7 10 10 0 0 10 10
Lanes: 0 0 1 0 0 0 0 0 0 0 1 0 1 0 1 0 1 0
Volume Module:
Base Vol: 0 0 0 0 0 0 64 258 34 48 499 305
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 0 0 0 64 258 34 48 499 305
Added Vol: 0 0 0 0 0 0 8 3 0 0 0 0 48
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 72 261 34 48 499 353
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 0 0 0 0 0 0 79 286 37 53 547 387
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 0 0 0 79 286 37 53 547 387
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 0 0 0 79 286 37 53 547 387

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.31 0.93 0.93 0.55 0.89 0.89
Lanes: 0.00 1.00 0.00 0.00 0.00 0.00 1.00 1.77 0.23 1.00 1.17 0.83
Final Sat.: 0 1900 0 0 0 0 583 3140 409 1049 1983 1403

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.14 0.09 0.09 0.05 0.28 0.28
Crit Moves: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Green Time: 0.0 0.0 0.0 0.0 0.0 0.0 110.0 110.0 110.0 110.0 110.0 110.0
Volume/Cap: 0.00 0.00 0.00 0.00 0.00 0.00 0.14 0.09 0.09 0.05 0.28 0.28
Delay/Veh: 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0
LOS by Move: A A A A A A A A A A A A
HCM2kAVGQ: 0 0 0 0 0 0 0 0 0 0 0 0

Note: Queue reported is the number of cars per lane.

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Existing Plus Project
AM Peak
SD Courthouse Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
Intersection #110 Broadway / Union
Cycle (sec): 110 Critical Vol./Cap.(X): 0.418
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 9.4
Optimal Cycle: 25 Level Of Service: A

Street Name: Union St. Broadway
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Permitted Permitted Permitted Permitted
Rights: Include Include Include Include

Min. Green: 7 10 10 0 0 0 0 7 10 10 0 0 10 10
Lanes: 0 1 0 0 0 0 0 0 1 0 0 1 0 1 0 1 0
Volume Module:
Base Vol: 0 0 0 42 0 109 13 276 0 0 708 200
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 42 0 109 13 276 0 0 708 200
Added Vol: 25 8 0 5 4 3 8 -5 0 0 21 21
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 25 8 0 47 4 112 21 271 0 0 729 221
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90
PHF Volume: 28 9 0 52 4 125 23 301 0 0 811 246
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 28 9 0 52 4 125 23 301 0 0 811 246
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 28 9 0 52 4 125 23 301 0 0 811 246

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.81 0.81 1.00 0.83 0.83 0.83 0.23 0.95 0.95 1.00 0.92 0.92
Lanes: 0.76 0.24 0.00 0.29 0.02 0.69 1.00 2.00 0.00 1.00 1.53 0.47
Final Sat.: 1162 372 0 455 39 1085 428 3610 0 1900 2673 810

Capacity Analysis Module:
Vol/Sat: 0.02 0.02 0.00 0.11 0.11 0.11 0.05 0.08 0.00 0.00 0.30 0.30
Crit Moves: 30.2 30.2 0.0 30.2 30.2 30.2 79.8 79.8 0.0 0.0 79.8 79.8

Green Time: 30.2 30.2 0.0 30.2 30.2 30.2 79.8 79.8 0.0 0.0 79.8 79.8
Volume/Cap: 0.09 0.09 0.00 0.42 0.42 0.42 0.08 0.12 0.00 0.00 0.42 0.42
Delay/Veh: 29.7 29.7 0.0 33.3 33.3 33.3 4.5 4.5 0.0 0.0 6.1 6.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 29.7 29.7 0.0 33.3 33.3 33.3 4.5 4.5 0.0 0.0 6.1 6.1
LOS by Move: C C A C C C C C A A A A
HCM2kAVGQ: 1 1 0 5 5 5 0 2 0 0 0 0

Note: Queue reported is the number of cars per lane.

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APPENDIX D

Cumulative Conditions Growth Factor Calculation Worksheets

Daily Traffic Volume Calculations

- Estimated Volume from SANDAG & Existing Count Data

APPENDIX E

Cumulative Conditions HCM Worksheets

EX+C AM Wed Apr 28, 2010 11:12:15 Page 1-1

Existing Plus Cumulative Conditions

AM Peak

SD Courthouse Project

Scenario Report

Scenario: EX+C AM

Command: cum-am

Volume: cum-am

Geometry: ex

Impact Fee: Default Impact Fee

Trip Generation: none

Trip Distribution: none

Paths: Default Path

Routes: Default Route

Configuration: cum-am

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Existing Plus Cumulative Conditions

AM Peak

SD Courthouse Project

Trip Distribution Report

Percent Of Trips project

Zone	1	2	3	4	5	6	7	10	11	13	16
1	4.0	4.0	4.0	30.0	30.0	30.0	30.0	11.0	0.0	13.0	4.0
2	4.0	4.0	4.0	30.0	30.0	30.0	30.0	11.0	0.0	13.0	4.0
5	4.0	0.0	4.0	30.0	0.0	30.0	0.0	11.0	0.0	13.0	4.0
	To Gates										
	18	19	20								

Zone

1	0.0	4.0	4.0
2	0.0	4.0	4.0
5	0.0	4.0	0.0

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Existing Plus Cumulative Conditions
AM Peak

SD Courthouse Project

Intersection Volume Report
Future Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
101 Ash / Union	16	36	0	0	106	30	0	0	0	215	1502	73
102 Ash / Front	0	0	0	0	1146	345	0	0	0	504	1460	0
103 1st / A	0	702	145	0	0	0	319	339	0	0	0	0
104 B / State	37	119	39	0	0	0	81	38	0	0	165	185
105 B / Union	23	88	18	8	122	79	7	44	23	35	229	48
106 B / Front	0	0	0	40	1240	245	0	43	25	32	69	0
107 C / State	0	255	15	0	0	0	36	20	0	0	0	0
108 C / Union	0	170	43	14	164	0	2	21	12	0	0	0
109 Broadway / St	108	11	108	0	0	0	69	279	37	52	539	329
110 Broadway / Un	107	107	27	45	107	117	14	295	11	11	758	214

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Existing Plus Cumulative Conditions
AM Peak

SD Courthouse Project

Intersection Volume Report
Base Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
101 Ash / Union	16	36	0	0	106	30	0	0	0	215	1502	73
102 Ash / Front	0	0	0	0	1146	345	0	0	0	504	1460	0
103 1st / A	0	702	145	0	0	0	319	339	0	0	0	0
104 B / State	37	119	39	0	0	0	81	38	0	0	165	185
105 B / Union	23	88	18	8	122	79	7	44	23	35	229	48
106 B / Front	0	0	0	40	1240	245	0	43	25	32	69	0
107 C / State	0	255	15	0	0	0	36	20	0	0	0	0
108 C / Union	0	170	43	14	164	0	2	21	12	0	0	0
109 Broadway / St	108	11	108	0	0	0	69	279	37	52	539	329
110 Broadway / Un	107	107	27	45	107	117	14	295	11	11	758	214

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Existing Plus Cumulative Conditions

AM Peak

SD Courthouse Project

Impact Analysis Report

Level Of Service

Intersection	Base Del/V/ LOS Veh C	Future Del/V/ LOS Veh C	Change in
#101 Ash / Union	A 6.3 0.431	A 6.3 0.431	+ 0.000 D/V
#102 Ash / Front	C 20.4 0.620	C 20.4 0.620	+ 0.000 D/V
#103 1st / A	B 17.3 0.354	B 17.3 0.354	+ 0.000 D/V
#104 B / State	A 9.6 0.433	A 9.6 0.433	+ 0.000 V/C
#105 B / Union	B 10.3 0.452	B 10.3 0.452	+ 0.000 V/C
#106 B / Front	A 6.2 0.409	A 6.2 0.409	+ 0.000 D/V
#107 C / State	B 11.1 0.000	B 11.1 0.000	+ 0.000 D/V
#108 C / Union	B 10.6 0.000	B 10.6 0.000	+ 0.000 D/V
#109 Broadway / State	B 11.6 0.429	B 11.6 0.429	+ 0.000 D/V
#110 Broadway / Union	B 15.8 0.515	B 15.8 0.515	+ 0.000 D/V

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Existing Plus Cumulative Conditions

AM Peak

SD Courthouse Project

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

 Intersection #101 Ash / Union
 Cycle (sec): 110
 Loss Time (sec): 0 (Y+R=4.0 sec)
 Optimal Cycle: 25
 Critical Vol./Cap.(X): 0.431
 Average Delay (sec/veh): 6.3
 Level Of Service: A

Street Name: Union St. Ash St.
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Permitted Permitted Permitted Permitted
 Rights: Include Include Include Include

Min. Green: 7 10 0 0 10 10 0 0 0 0 0 0 7 10 10
 Lanes: 0 1 0 0 0 0 0 0 1 0 0 0 0 1 1 0

Volume Module:

Base Vol: 15 35 0 0 102 29 0 0 207 1444 70
 Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04
 Initial Bse: 16 36 0 0 106 30 0 0 215 1502 73
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99
 PHF Volume: 16 37 0 0 107 30 0 0 217 1515 73
 Reduced Vol: 16 37 0 0 107 30 0 0 217 1515 73
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Volume: 16 37 0 0 107 30 0 0 217 1515 73

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustment: 0.94 0.94 1.00 1.00 0.97 0.97 1.00 1.00 1.00 1.00
 Lanes: 0.30 0.70 0.00 0.00 0.78 0.22 0.00 0.00 0.00 0.00
 Final Sat.: 538 1256 0 0 1435 408 0 0 609 4248 206

Capacity Analysis Module:

Vol/Sat: 0.03 0.03 0.00 0.00 0.07 0.07 0.00 0.00 0.00 0.00
 Crit Moves: *****
 Green Time: 19.0 19.0 0.0 0.0 19.0 19.0 0.0 0.0 0.0 0.0
 Volume/Cap: 0.17 0.17 0.00 0.00 0.43 0.43 0.00 0.00 0.00 0.00
 Delay/Veh: 39.0 39.0 0.0 0.0 41.6 41.6 0.0 0.0 0.0 0.0
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 39.0 39.0 0.0 0.0 41.6 41.6 0.0 0.0 0.0 0.0
 LOS by Move: D D A A D D A A A A A A
 HCM2KAVGQ: 2 2 0 0 4 4 0 0 0 0

Note: Queue reported is the number of cars per lane.

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Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Ash / Front

Cycle (sec): 110 Critical Vol./Cap.(X): 0.620
Loss time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 20.4
Optimal Cycle: 60 Level of Service: C

Street Name: Front St. Ash St.
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected Protected Protected Protected Protected
Rights: Include Include Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 10 10 0 0 0 0 0 0 7 10 0
Lanes: 0 0 0 0 0 0 0 2 1 0 0 0 0 0 0 1 1 2 0 0
Volume Module:
Base Vol: 0 0 1102 332 0 0 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04
Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04
Initial Bse: 0 0 0 0 1146 345 0 0 0 0 504 1460 0 0 0 0 504 1460 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96
PHF Volume: 0 0 0 0 1196 360 0 0 0 0 527 1524 0 0 0 0 527 1524 0
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 0 1196 360 0 0 0 0 527 1524 0 0 0 0 527 1524 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
Final Sat.: 0 0 0 0 3847 1159 0 0 0 0 1706 4940 0 0 0 0 1706 4940 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.00 0.31 0.31 0.00 0.00 0.00 0.00 0.31 0.31 0.00 0.00 0.00 0.00 0.00 0.00
Crit Moves: ****
Green Time: 0.0 0.0 0.0 0.0 55.2 55.2 0.0 0.0 0.0 0.0 54.8 54.8 0.0 0.0 0.0 0.0 0.0 0.0
Volume/Cap: 0.00 0.00 0.00 0.00 0.62 0.62 0.00 0.00 0.00 0.00 0.62 0.62 0.00 0.00 0.00 0.00 0.00 0.00
Delay/Veh: 0.0 0.0 0.0 0.0 20.3 20.3 0.0 0.0 0.0 0.0 20.4 20.4 0.0 0.0 0.0 0.0 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 0.0 20.3 20.3 0.0 0.0 0.0 0.0 20.4 20.4 0.0 0.0 0.0 0.0 0.0 0.0
LOS by Move: A A A A C C A A C C A A C C A A C C A A
HCM2kAVGQ: 0 0 0 0 14 14 0 0 0 0 14 14 0 0 0 0 14 14 0

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 1st / A

Cycle (sec): 110 Critical Vol./Cap.(X): 0.354
Loss time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 17.3
Optimal Cycle: 35 Level of Service: B

Street Name: 1st St. A St.
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected Protected Protected Protected Protected
Rights: Include Include Include Include Include Include Include Include

Min. Green: 0 0 10 10 0 0 0 0 0 0 7 10 0 0 0 0 0
Lanes: 0 0 2 1 1 0 0 0 0 0 0 1 2 0 0 0 0 0 0
Volume Module:
Base Vol: 0 669 138 0 0 0 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05
Growth Adj: 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05
Initial Bse: 0 702 145 0 0 0 319 339 0 0 0 0 319 339 0 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96
PHF Volume: 0 735 152 0 0 0 0 0 334 355 0 0 0 0 334 355 0 0
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 735 152 0 0 0 334 355 0 0 334 355 0 0 334 355 0 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 3.00 1.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.00 2.00 0.00 0.00 0.00 0.00 0.00 0.00
Final Sat.: 0 5052 1684 0 0 0 0 0 1603 3206 0 0 0 0 1603 3206 0 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.15 0.09 0.00 0.00 0.00 0.21 0.11 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
Crit Moves: ****
Green Time: 0.0 45.2 45.2 0.0 0.0 0.0 64.8 64.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Volume/Cap: 0.00 0.35 0.22 0.00 0.00 0.00 0.35 0.19 0.00 0.00 0.35 0.19 0.00 0.00 0.00 0.00 0.00 0.00
Delay/Veh: 0.0 22.4 21.0 0.0 0.0 0.0 11.9 10.5 0.0 0.0 11.9 10.5 0.0 0.0 0.0 0.0 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 22.4 21.0 0.0 0.0 0.0 11.9 10.5 0.0 0.0 11.9 10.5 0.0 0.0 0.0 0.0 0.0 0.0
LOS by Move: A C C A A A B B A A A A A A A A A A
HCM2kAVGQ: 0 6 4 0 0 0 6 3 0 0 6 3 0 0 0 0 0 0

Note: Queue reported is the number of cars per lane.

Existing Plus Cumulative Conditions
AM Peak
SD Courthouse Project

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #104 B / State
Cycle (sec): 100 Critical Vol./Cap.(X): 0.433
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 9.6
Optimal Cycle: 0 Level of Service: A

Street Name: State St. B St.
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 1 1 0 0 0 0 0 0 0 1 0 0 0 0 0 1 0

Volume Module:
Base Vol: 34 110 36 0 0 75 35 0 0 153 171
Growth Adj: 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08
Initial Bse: 37 119 39 0 0 81 38 0 0 165 185
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97
PHF Volume: 38 122 40 0 0 83 39 0 0 170 190
Reduced Vol: 38 122 40 0 0 83 39 0 0 170 190
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 38 122 40 0 0 83 39 0 0 170 190

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.57 1.93 0.60 0.00 0.00 0.68 0.32 0.00 0.00 0.47 0.53
Final Sat.: 334 1140 400 0 0 481 224 0 0 392 438

Capacity Analysis Module:
Vol/Sat: 0.11 0.11 0.10 xxxx xxxx 0.17 0.17 xxxx xxxx 0.43 0.43
Crit Moves: ****
Delay/Veh: 9.2 8.8 8.3 0.0 0.0 8.9 8.9 0.0 0.0 10.3 10.3
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 9.2 8.8 8.3 0.0 0.0 8.9 8.9 0.0 0.0 10.3 10.3
LOS by Move: A A A * * A A * * B B
ApproachDel: 8.8 8.8 8.9 8.9 10.3
Delay Adj: 1.00 1.00 1.00 1.00 1.00
ApprAdjDel: 8.8 8.8 8.9 8.9 10.3
LOS by Appr: A A A * A B
AllwayAvgQ: 0.1 0.1 0.1 0.0 0.0 0.2 0.2 0.2 0.2 0.7 0.7
Note: Queue reported is the number of cars per lane.

Existing Plus Cumulative Conditions
AM Peak
SD Courthouse Project

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #105 B / Union
Cycle (sec): 100 Critical Vol./Cap.(X): 0.452
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.3
Optimal Cycle: 0 Level of Service: B

Street Name: Union St. B St.
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0 0 1 0 0

Volume Module:
Base Vol: 23 89 18 8 122 79 7 44 23 35 229 48
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 23 89 18 8 122 79 7 44 23 35 229 48
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96
PHF Volume: 24 92 19 8 127 82 7 46 24 37 239 50
Reduced Vol: 24 92 19 8 127 82 7 46 24 37 239 50
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 24 92 19 8 127 82 7 46 24 37 239 50

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.18 0.68 0.14 0.04 0.58 0.38 0.09 0.60 0.31 0.11 0.74 0.15
Final Sat.: 116 446 91 27 407 264 62 391 204 81 528 111

Capacity Analysis Module:
Vol/Sat: 0.21 0.21 0.21 0.31 0.31 0.31 0.12 0.12 0.12 0.45 0.45 0.45
Crit Moves: ****
Delay/Veh: 9.3 9.3 9.3 9.8 9.8 9.8 8.6 8.6 8.6 11.4 11.4 11.4
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 9.3 9.3 9.3 9.8 9.8 9.8 8.6 8.6 8.6 11.4 11.4 11.4
LOS by Move: A A A A A A A A A B B B
ApproachDel: 9.3 9.3 9.8 8.6 8.6 8.6 11.4
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00
ApprAdjDel: 9.3 9.8 8.6 8.6 8.6 8.6 11.4
LOS by Appr: A A A A A A A B
AllwayAvgQ: 0.2 0.2 0.2 0.4 0.4 0.4 0.1 0.1 0.1 0.7 0.7 0.7
Note: Queue reported is the number of cars per lane.

Existing Plus Cumulative Conditions
AM Peak
SD Courthouse Project

Level of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #106 B / Front

Cycle (sec): 110 Critical Vol./Cap.(X): 0.409
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 6.2
Optimal Cycle: 31 Level of Service: A

Street Name: Front St. B St.
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted Permitted
Rights: Include Include Include Include Include

Min. Green: 0 0 0 0 7 10 10 0 10 10 7 10 0
Lanes: 0 0 0 0 0 1 1 1 0 0 0 1 0 0 0 0
Volume Module:
Base Vol: 0 0 40 1240 245 0 43 25 32 69 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 40 1240 245 0 43 25 32 69 0
User Adj: 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 0 0 45 1408 278 0 49 28 36 78 0
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
M/F Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 0 0 0 45 1408 278 0 49 28 36 78 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.88 0.88 0.88 0.95 0.95 0.92 0.92 1.00
Lanes: 0.00 0.00 0.00 0.08 2.44 0.48 0.00 0.63 0.37 0.32 0.68 0.00
Final Sat: 0 0 0 132 4100 810 0 1141 664 555 1197 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.34 0.34 0.34 0.00 0.04 0.04 0.07 0.07 0.00
Crit Moves: ***
Green Time: 0.0 0.0 0.0 92.4 92.4 92.4 0.0 17.6 17.6 17.6 17.6 0.0
Volume/Cap: 0.00 0.00 0.00 0.41 0.41 0.41 0.00 0.27 0.27 0.41 0.41 0.00
Delay/Veh: 0.0 0.0 0.0 2.2 2.2 2.2 0.0 41.0 41.0 42.5 42.5 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 2.2 2.2 2.2 0.0 41.0 41.0 42.5 42.5 0.0
LOS by Move: A A A A A A D D D D A
HCM2kAvgQ: 0 0 0 5 5 5 0 2 2 4 4 0

Note: Queue reported is the number of cars per lane.

Existing Plus Cumulative Conditions
AM Peak
SD Courthouse Project

Level of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #107 C / State

Average Delay (sec/veh): 10.2 Worst Case Level of Service: B (11.1)

Street Name: State St. C St.
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include

Lanes: 0 0 2 1 0 0 0 0 0 0 1 1 0 0 0 0 0 0
Volume Module:
Base Vol: 0 238 14 0 0 0 0 34 19 0 0 0 0
Growth Adj: 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07
Initial Bse: 0 255 15 0 0 0 36 20 0 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88
PHF Volume: 0 291 17 0 0 0 42 23 0 0 0 0
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Volume: 0 291 17 0 0 0 42 23 0 0 0 0
Critical Gap Module:
Critical Gap: 6.5 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2
FollowUpTm: 4.0 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3
Capacity Module:
Conflict Vol: 106 12 106 106 106 106 106 106 106 106 106 106
Potential Cap: 788 1075 1075 1075 1075 1075 1075 1075 1075 1075 1075 1075
Move Cap: 750 1075 1075 1075 1075 1075 1075 1075 1075 1075 1075 1075
Volume/Cap: 0.39 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02

Level of Service Module:
2Way95thQ: 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
Control Del: 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11.5
LOS by Move: B B B B B B B B B B B B
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Queue: 786 786 786 786 786 786 786 786 786 786 786 786
Shrd ConDel: 10.4 10.4 10.4 10.4 10.4 10.4 10.4 10.4 10.4 10.4 10.4 10.4
Shared LOS: B B B B B B B B B B B B
ApproachDel: 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1
ApproachLOS: B B B B B B B B B B B B

Note: Queue reported is the number of cars per lane.

EX+C AM
Existing Plus Cumulative Conditions
AM Peak
SD Courthouse Project

EX+C AM
Existing Plus Cumulative Conditions
AM Peak
SD Courthouse Project

Level of Service Computation Report

Level of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #109 Broadway / State

Intersection #108 C / Union

Cycle (sec): 110 Critical Vol./Cap.(X): 0.429

Average Delay (sec/veh): 9.7 Worst Case Level of Service: B [10.6]

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.6

Street Name: North Bound South Bound East Bound West Bound

Optimal Cycle: 33 Level of Service: B

Approach: Union St. C St.

Street Name: State St. Broadway

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Rights: Include Include Include Include

Lanes: 7 10 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 0 0 1 0 0 0 1 0 0 0 0 1 0 1 0 0 0 0 0 0

Volume Module:

Volume Module:

Base Vol: 100 10 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Growth Adj: 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08
Initial Base: 108 11 108 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 118 12 118 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 118 12 118 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Base Vol: 0 159 40 13 153 0 2 20 11 0 0 0 0 0 0 0 0 0 0 0
Growth Adj: 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07
Initial Base: 0 170 43 14 164 0 2 21 12 0 0 0 0 0 0 0 0 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 0 188 47 15 181 0 2 24 13 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0
Final Volume: 0 188 47 15 181 0 2 24 13 0 0 0 0 0 0 0 0 0 0 0

Critical Gap Module:

Critical Gap Module:

Critical Gap: 6.5 6.2 7.1 6.5 6.5 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1
FollowUpTm: 4.0 3.3 3.5 4.0 4.0 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2

Critical Gap: 6.5 6.2 7.1 6.5 6.5 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1
FollowUpTm: 4.0 3.3 3.5 4.0 4.0 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2

Capacity Module:

Capacity Module:

Conflict Vol: 35 18 111 41 41 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Potential Cap: 862 862 862 862 862 862 862 862 862 862 862 862 862 862 862 862 862 862 862
Move Cap: 859 859 859 859 859 859 859 859 859 859 859 859 859 859 859 859 859 859 859
Volume/Cap: 0.22 0.04 0.02 0.21 0.21 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Conflict Vol: 35 18 111 41 41 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Potential Cap: 862 862 862 862 862 862 862 862 862 862 862 862 862 862 862 862 862 862 862
Move Cap: 859 859 859 859 859 859 859 859 859 859 859 859 859 859 859 859 859 859 859
Volume/Cap: 0.22 0.04 0.02 0.21 0.21 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Level of Service Module:

Level of Service Module:

2Way95thQ: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6
Control Del: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6
LOS by Move: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6
Control Del: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6
LOS by Move: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6

2Way95thQ: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6
Control Del: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6
LOS by Move: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6
Control Del: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6
LOS by Move: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6

Control Del: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6

Control Del: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6

LOS by Move: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6

LOS by Move: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6

Control Del: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6

Control Del: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6

LOS by Move: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6

LOS by Move: 10.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6

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Existing Plus Cumulative Conditions
AM Peak
SD Courthouse Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #110 Broadway / Union

Cycle (sec): 110 Critical Vol./Cap.(X): 0.515
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 15.8
Optimal Cycle: 30 Level Of Service: B

Street Name: Union St. Broadway
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted
Rights: Include Include Include Include

Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Lanes:	0	0	1	0	0	0	1	0	0	1	0	1
Volume Module:	-----											
Base Vol:	100	100	25	42	100	109	13	276	10	10	708	200
Growth Adj:	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Initial Bse:	107	107	27	45	107	117	14	295	11	11	758	214
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	119	119	30	50	119	130	15	328	12	12	843	238
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	119	119	30	50	119	130	15	328	12	12	843	238
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	119	119	30	50	119	130	15	328	12	12	843	238
Saturation Flow Module:	-----											
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.69	0.69	0.69	0.86	0.86	0.86	0.18	0.95	0.95	0.51	0.92	0.92
Lanes:	0.45	0.44	0.11	0.17	0.40	0.43	1.00	1.93	0.07	1.00	1.56	0.44
Final Sat.:	580	580	145	274	653	712	348	3466	126	960	2722	769
Capacity Analysis Module:	-----											
Vol/Sat:	0.21	0.21	0.21	0.18	0.18	0.18	0.04	0.09	0.09	0.01	0.31	0.31
Crit Moves:	*****											
Green Time:	43.9	43.9	43.9	43.9	43.9	43.9	66.1	66.1	66.1	66.1	66.1	66.1
Volume/Cap:	0.51	0.51	0.51	0.46	0.46	0.46	0.07	0.16	0.16	0.02	0.51	0.51
Delay/Veh:	25.9	25.9	25.9	24.8	24.8	24.8	9.3	9.7	9.7	8.9	12.9	12.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.9	25.9	25.9	24.8	24.8	24.8	9.3	9.7	9.7	8.9	12.9	12.9
LOS by Move:	C	C	C	C	C	C	A	A	A	A	B	B
HCM2kAVGQ:	7	7	7	8	8	8	0	3	3	0	11	11
Note:	Queue reported is the number of cars per lane.											
*****	*****											

Existing Plus Cumulative Plus Project Conditions
SD Courthouse Study
AM Peak Period

Trip Generation Report
With Project / Less MB/PL Trips
Forecast for am project

Zone #	Subzone	Amount	Units	Rate		Trips		Trips		Total % Of Trips Total
				In	Out	In	Out	In	Out	
1	Parking 1	34.00	Courthouse	0.84	0.16	29	5	34	11.8	
1	Parking 1	180.00	MB/PL Reassign	0.90	0.10	162	18	180	62.7	
	Zone 1 Subtotal					191	23	214	74.6	
2	Parking 2	100.00	Trip Distribut	0.00	0.00	0	0	0	0.0	
2	Parking 2	34.00	Courthouse	0.84	0.16	29	5	34	11.8	
2	Parking 2	181.00	MB/PL Reassign	0.90	0.10	163	18	181	63.1	
	Zone 2 Subtotal					192	23	215	74.9	
5		-361.00	Madge Bradley	0.90	0.10	-325	-36	-361	-125.	
5		219.00	New Office Use	0.90	0.10	197	22	219	76.3	
	Zone 5 Subtotal					-128	-14	-142	-49.5	

TOTAL 255 32 287 100.0

Existing Plus Cumulative Plus Project Conditions
SD Courthouse Study
AM Peak Period

Scenario Report

Scenario: EX+C+P AM
Command: proj-am
Volume: cum-am
Geometry: ex
Impact Fee: Default Impact Fee
Trip Generation: proj
Trip Distribution: zone4am
Paths: Default Path
Routes: Default Route
Configuration: proj-am

EX+C+P AM Wed Apr 28, 2010 11:17:59 Page 4-1

Existing Plus Cumulative Plus Project Conditions
SD Courthouse Study
AM Peak Period

Impact Analysis Report
Level Of Service

Intersection	Base Del/ LOS A	V/ Veh C	Future Del/ LOS A	V/ Veh C	Change in
#101 Ash / Union	6.3	0.440	6.4	0.483	+ 0.052 D/V
#102 Ash / Front	20.6	0.632	21.3	0.668	+ 0.696 D/V
#103 1st / A	17.4	0.361	17.8	0.370	+ 0.389 D/V
#104 B / State	9.7	0.437	10.8	0.532	+ 0.095 V/C
#105 B / Union	10.4	0.456	11.9	0.565	+ 0.109 V/C
#106 B / Front	6.2	0.417	6.2	0.431	-0.015 D/V
#107 C / State	11.1	0.000	23.1	0.000	+11.996 D/V
#108 C / Union	10.6	0.000	10.9	0.000	+ 0.258 D/V
#109 Broadway / State	11.7	0.438	11.4	0.455	-0.330 D/V
#110 Broadway / Union	15.9	0.525	17.3	0.578	+ 1.348 D/V

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Existing Plus Cumulative Plus Project Conditions
SD Courthouse Study
AM Peak Period

Trip Distribution Report

Percent Of Trips project

Zone	1	2	3	4	5	6	7	10	11	13	16
1	4.0	4.0	4.0	30.0	30.0	30.0	30.0	11.0	0.0	13.0	4.0
2	4.0	4.0	4.0	30.0	30.0	30.0	30.0	11.0	0.0	13.0	4.0
5	4.0	0.0	4.0	30.0	0.0	30.0	0.0	11.0	0.0	13.0	4.0
Zone	To Gates 18	To Gates 19	To Gates 20								
1	0.0	4.0	4.0								
2	0.0	4.0	4.0								
5	0.0	4.0	0.0								

Existing Plus Cumulative Plus Project Conditions
SD Courthouse Study
AM Peak Period

Level of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
Intersection #101 Ash / Union
Cycle (sec): 110 Critical Vol./Cap.(X): 0.483
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 6.4
Optimal Cycle: 28 Level of Service: A

Street Name: Union St. Ash St.
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Permitted Permitted Permitted Permitted
Rights: Include Include Include Include

Min. Green: 7 10 0 0 10 10 0 0 0 0 0 0 7 10 10
Lanes: 0 1 0 0 0 0 0 0 1 0 0 0 0 1 1 0

Volume Module:
Base Vol: 15 35 0 0 102 29 0 0 0 207 1444 70
Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04
Initial Bse: 16 36 0 0 106 30 0 0 0 215 1502 73
Added Vol: 2 2 0 0 10 0 0 0 0 113 58 -1
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 18 38 0 0 116 30 0 0 0 328 1560 72
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99
PHF Volume: 18 39 0 0 117 30 0 0 0 331 1574 72
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 18 39 0 0 117 30 0 0 0 331 1574 72

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.93 1.00 1.00 0.95 0.95 1.00 1.00 0.86 0.86 0.86
Lanes: 0.31 0.69 0.00 0.00 0.79 0.21 0.00 0.00 0.50 2.39 0.11
Final Sat.: 555 1212 0 0 1437 373 0 0 0 825 3921 180

Capacity Analysis Module:
Vol/Sat: 0.03 0.03 0.00 0.00 0.08 0.08 0.00 0.00 0.40 0.40 0.40
Crit Moves: 18.6 18.6 0.0 0.0 18.6 18.6 0.0 0.0 91.4 91.4 91.4
Green Time: 0.19 0.19 0.00 0.00 0.48 0.48 0.00 0.00 0.48 0.48 0.48
Volume/Cap: 39.6 39.6 0.0 0.0 42.6 42.6 0.0 0.0 2.7 2.7 2.7
Delay/Veh: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
User DelAdj: 39.6 39.6 0.0 0.0 42.6 42.6 0.0 0.0 2.7 2.7 2.7
AdjDel/Veh: 39.6 39.6 0.0 0.0 42.6 42.6 0.0 0.0 2.7 2.7 2.7
LOS by Move: D D A A D D A A A A A A
HCM2kAVGQ: 2 2 0 0 5 5 0 0 7 7 7

Note: Queue reported is the number of cars per lane.

Existing Plus Cumulative Plus Project Conditions
SD Courthouse Study
AM Peak Period

Level of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
Intersection #102 Ash / Front
Cycle (sec): 110 Critical Vol./Cap.(X): 0.668
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 21.3
Optimal Cycle: 69 Level of Service: C

Street Name: Front St. Ash St.
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Permitted Permitted Permitted Permitted
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 10 10 0 0 0 0 0 7 10 0
Lanes: 0 0 0 0 0 0 2 1 0 0 0 0 0 1 2 0

Volume Module:
Base Vol: 0 0 0 0 1102 332 0 0 0 485 1404 0
Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04
Initial Bse: 0 0 0 0 1146 345 0 0 0 504 1460 0
Added Vol: 0 0 0 0 -10 86 0 0 0 27 84 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 1136 431 0 0 0 531 1544 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96
PHF Volume: 0 0 0 0 1186 450 0 0 0 555 1612 0
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 0 0 0 0 1186 450 0 0 0 555 1612 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 1.00 0.86 0.86 1.00 1.00 1.00 0.86 0.86
Lanes: 0.00 0.00 0.00 0.00 2.17 0.63 0.00 0.00 0.00 1.02 2.98
Final Sat.: 0 0 0 0 3533 1341 0 0 0 1669 4851 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.00 0.34 0.34 0.00 0.00 0.00 0.33 0.33
Crit Moves: 0.0 0.0 0.0 0.0 55.3 55.3 0.0 0.0 0.0 54.7 54.7
Green Time: 0.00 0.00 0.00 0.00 0.67 0.67 0.00 0.00 0.00 0.67 0.67
Volume/Cap: 0.00 0.00 0.00 0.00 21.2 21.2 0.0 0.0 0.0 21.3 21.3
Delay/Veh: 0.0 0.0 0.0 0.0 21.2 21.2 0.0 0.0 0.0 21.3 21.3
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 0.0 21.2 21.2 0.0 0.0 0.0 21.3 21.3
LOS by Move: A A A A C C A A C C A
HCM2kAVGQ: 0 0 0 0 16 16 0 0 0 16 16

Note: Queue reported is the number of cars per lane.

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Existing Plus Cumulative Plus Project Conditions
SD Courthouse Study
AM Peak Period

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #105 B / Union

Cycle (sec): 100 Critical Vol./Cap.(X): 0.565
Loss Time (sec): 0 (Y+R=4.0 sec) Average Vol.(sec/veh): 11.9
Optimal Cycle: 0 Level Of Service: B

Street Name: Union St. B St.
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0 0

Volume Module:

Base Vol:	23	88	18	8	122	79	7	44	23	35	229	48
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	88	18	8	122	79	7	44	23	35	229	48
Added Vol:	0	37	0	0	7	8	0	7	6	0	58	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	125	18	8	129	87	7	51	29	35	287	48
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	24	130	19	8	135	91	7	53	30	37	300	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	130	19	8	135	91	7	53	30	37	300	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	24	130	19	8	135	91	7	53	30	37	300	50

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.14	0.75	0.11	0.03	0.58	0.39	0.08	0.59	0.33	0.09	0.78	0.13
Final Sat:	85	459	66	23	373	252	49	356	202	65	530	89

Capacity Analysis Module:

Vol/Sat:	0.28	0.28	0.28	0.36	0.36	0.15	0.15	0.15	0.15	0.56	0.56	0.56
Crit Moves:	***	***	***	***	***	***	***	***	***	***	***	***
Delay/Veh:	10.4	10.4	10.4	10.8	10.8	10.8	9.2	9.2	9.2	13.9	13.9	13.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.4	10.4	10.4	10.8	10.8	10.8	9.2	9.2	9.2	13.9	13.9	13.9
LOS by Move:	B	B	B	B	B	B	A	A	A	B	B	B
ApproachDel:	10.4	10.4	10.8	10.8	10.8	9.2	9.2	9.2	9.2	13.9	13.9	13.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ApprAdjDel:	10.4	10.4	10.8	10.8	10.8	9.2	9.2	9.2	9.2	13.9	13.9	13.9
LOS by Appr:	B	B	B	B	B	B	A	A	A	B	B	B
AllwayAvgQ:	0.3	0.3	0.3	0.5	0.5	0.5	0.1	0.1	0.1	1.1	1.1	1.1

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Existing Plus Cumulative Plus Project Conditions
SD Courthouse Study
AM Peak Period

Note: Queue reported is the number of cars per lane.

Existing Plus Cumulative Plus Project Conditions
SD Courthouse Study
AM Peak Period

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
Intersection #106 B / Front
Cycle (sec): 110 Critical Vol./Cap.(X): 0.431
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 6.2
Optimal Cycle: 33 Level Of Service: A

Street Name: Front St. B St.
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Permitted Permitted Permitted Permitted
Rights: Include Include Include Include Include Include Include Include

Min. Green:	0	0	0	0	7	10	10	0	10	10	7	10	0
Lanes:	0	0	0	0	0	1	1	0	0	0	1	0	0
Volume Module:													
Base Vol:	0	0	0	0	40	1240	245	0	43	25	32	69	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	40	1240	245	0	43	25	32	69	0
Added Vol:	0	0	0	0	-2	58	0	7	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	40	1238	303	0	50	25	32	69	0
User Adj:	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	0	0	0	45	1405	344	0	57	28	36	78	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	45	1405	344	0	57	28	36	78	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	45	1405	344	0	57	28	36	78	0

Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	0.86	0.86	0.86	1.00	0.94	0.94	0.91	0.91	1.00
Lanes:	0.00	0.00	0.00	0.00	0.08	2.35	0.57	0.00	0.67	0.33	0.32	0.68	0.00
Final Sat.:	0	0	0	0	124	3850	942	0	1185	593	548	1182	0
Capacity Analysis Module:													
Vol/Sat:	0.00	0.00	0.00	0.00	0.37	0.37	0.37	0.00	0.05	0.05	0.07	0.07	0.00
Crit Moves:													
Green Time:	0.0	0.0	0.0	0.0	93.1	93.1	93.1	0.0	16.9	16.9	16.9	16.9	0.0
Volume/Cap:	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.00	0.31	0.31	0.31	0.43	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	2.1	2.1	2.1	0.0	42.0	42.0	43.3	43.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	2.1	2.1	2.1	0.0	42.0	42.0	43.3	43.3	0.0
LOS by Move:	A	A	A	A	A	A	A	A	D	D	D	D	A
HCW2KavgQ:	0	0	0	0	6	6	6	0	3	3	4	4	0

Note: Queue reported is the number of cars per lane.

Traffix 7.9.0415 (c) 2007 Dowling Assoc. Licensed to RBF PHOENIX, AZ

Existing Plus Cumulative Plus Project Conditions
SD Courthouse Study
AM Peak Period

Note: Queue reported is the number of cars per lane.

Traffix 7.9.0415 (c) 2007 Dowling Assoc. Licensed to RBF PHOENIX, AZ

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
Intersection #108 C / Union
Average Delay (sec/veh): 10.1 Worst Case Level Of Service: B [10.9]

Street Name: North Bound South Bound East Bound West Bound
Approach: L - T - R L - T - R L - T - R L - T - R
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include

Lanes: 0 0 0 1 0 0 1 0 0 0 0 1 0 0 0 1 0 0 0 0 0 0 0 0
Volume Module:
Base Vol: 0 159 40 13 153 0 2 20 11 0 0 0 0
Growth Adj: 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07
Initial Bse: 0 170 43 14 164 0 2 21 12 0 0 0 0
Added Vol: 0 37 0 0 12 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 207 43 14 176 0 2 21 12 0 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 0 229 47 15 194 0 2 24 13 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 229 47 15 194 0 2 24 13 0 0 0 0

Critical Gap Module:
Critical Gap: 6.5 6.2 7.1 6.5 4.0 4.1 4.1 4.1 4.1 4.1 4.1 4.1
FollowUpTime: 4.0 3.3 3.5 4.0 4.0 2.2 2.2 2.2 2.2 2.2 2.2 2.2

Capacity Module:
Conflict Vol: 35 18 131 41 41 0 0 0 0 0 0 0 0
Potential Cap.: 858 1060 841 851 851 900 900 900 900 900 900 900
Move Cap.: 858 1060 841 851 851 900 900 900 900 900 900 900
Volume/Cap.: 0.27 0.04 0.02 0.23 0.23 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Level Of Service Module:
2Way95thQ: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
Control Del: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
LOS by Move: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
Movement: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
Shared Cap.: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
SharedQueue: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
Shrd ConDel: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
Shared LOS: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
ApproachDel: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
ApproachLOS: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Note: Queue reported is the number of cars per lane.

Traffic 7.9.0415 (c) 2007 Dowling Assoc. Licensed to RBF PHOENIX, AZ

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
Intersection #107 C / State
Average Delay (sec/veh): 17.9 Worst Case Level Of Service: C [23.1]

Street Name: North Bound South Bound East Bound West Bound
Approach: L - T - R L - T - R L - T - R L - T - R
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include

Lanes: 0 0 2 1 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0
Volume Module:
Base Vol: 0 238 14 0 0 0 34 19 0 0 0 0 0 0
Growth Adj: 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07
Initial Bse: 0 255 15 0 0 0 36 20 0 0 0 0 0 0
Added Vol: 0 56 0 0 0 0 136 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 311 15 0 0 0 172 20 0 0 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88
PHF Volume: 0 355 17 0 0 0 197 23 0 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 355 17 0 0 0 197 23 0 0 0 0 0

Critical Gap Module:
Critical Gap: 6.5 6.2 6.2 6.2 6.2 4.1 4.1 4.1 4.1 4.1 4.1 4.1
FollowUpTime: 4.0 3.3 3.3 3.3 3.3 2.2 2.2 2.2 2.2 2.2 2.2 2.2

Capacity Module:
Conflict Vol: 417 12 12 12 12 0 0 0 0 0 0 0 0
Potential Cap.: 527 1069 1069 1069 1069 900 900 900 900 900 900 900
Move Cap.: 527 1069 1069 1069 1069 900 900 900 900 900 900 900
Volume/Cap.: 0.89 0.89 0.02 0.02 0.02 0.22 0.22 0.22 0.22 0.22 0.22 0.22

Level Of Service Module:
2Way95thQ: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
Control Del: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
LOS by Move: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
Movement: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
Shared Cap.: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
SharedQueue: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
Shrd ConDel: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
Shared LOS: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
ApproachDel: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
ApproachLOS: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Note: Queue reported is the number of cars per lane.

Traffic 7.9.0415 (c) 2007 Dowling Assoc. Licensed to RBF PHOENIX, AZ

Existing Plus Cumulative Plus Project Conditions
SD Courthouse Study
AM Peak Period

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
Intersection #109 Broadway / State
Cycle (sec): 110 Critical Vol./Cap.(X): 0.455
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.4
Optimal Cycle: 34 Level Of Service: B

Street Name: State St. Broadway
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Permitted Permitted Permitted Permitted
Rights: Include Include Include Include Include Include

Min. Green:	7	10	10	0	0	0	0	0	7	10	0	0	10	10
Lanes:	0	0	1	0	0	0	0	0	1	0	1	0	1	0
Volume Module:														
Base Vol:	100	10	100	0	0	0	0	0	64	258	34	48	499	305
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	108	11	108	0	0	0	0	0	69	279	37	52	539	329
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	48
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	108	11	108	0	0	0	0	0	77	282	37	52	539	377
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	118	12	118	0	0	0	0	0	85	309	40	57	591	414
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	118	12	118	0	0	0	0	0	85	309	40	57	591	414
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	118	12	118	0	0	0	0	0	85	309	40	57	591	414

Saturation Flow Module:														
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	0.86	0.86	1.00	1.00	0.22	0.92	0.92	0.50	0.87	0.87	0.50	0.87	0.87
Lanes:	0.48	0.05	0.47	0.00	0.00	0.00	1.77	0.23	1.00	1.18	0.82	1.00	1.18	0.82
Final Sat.:	777	78	777	0	0	0	421	3077	401	948	1952	1367	948	1367

Capacity Analysis Module:														
Vol/Sat:	0.15	0.15	0.15	0.00	0.00	0.00	0.20	0.10	0.10	0.06	0.30	0.30	0.06	0.30
Crit Moves:	***													
Green Time:	36.8	36.8	36.8	0.0	0.0	0.0	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2
Volume/Cap:	0.46	0.46	0.46	0.00	0.00	0.00	0.30	0.15	0.15	0.09	0.46	0.46	0.09	0.46
Delay/Veh:	29.3	29.3	29.3	0.0	0.0	0.0	8.3	6.9	6.9	6.6	9.0	9.0	6.6	9.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.3	29.3	29.3	0.0	0.0	0.0	8.3	6.9	6.9	6.6	9.0	9.0	6.6	9.0
LOS by Move:	C	C	C	A	A	A	A	A	A	A	A	A	A	A
HCM2kAVGQ:	7	7	7	0	0	0	2	2	2	1	9	9	1	9

Note: Queue reported is the number of cars per lane.

Existing Plus Cumulative Plus Project Conditions
SD Courthouse Study
AM Peak Period

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
Intersection #110 Broadway / Union
Cycle (sec): 110 Critical Vol./Cap.(X): 0.578
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 17.3
Optimal Cycle: 34 Level Of Service: B

Street Name: Union St. Broadway
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Permitted Permitted Permitted Permitted
Rights: Include Include Include Include

Min. Green:	7	10	10	0	0	0	0	0	7	10	0	0	10	10
Lanes:	0	0	1	0	0	0	0	0	1	0	1	0	1	0
Volume Module:														
Base Vol:	100	100	25	42	100	109	13	276	10	10	708	200	10	708
Growth Adj:	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Initial Bse:	107	107	27	45	107	117	14	295	11	11	758	214	11	758
Added Vol:	25	8	0	5	4	3	8	-5	0	0	21	21	0	21
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	132	115	27	50	111	120	22	290	11	11	779	235	11	779
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	147	128	30	56	123	133	24	323	12	12	866	261	12	866
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	147	128	30	56	123	133	24	323	12	12	866	261	12	866
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	147	128	30	56	123	133	24	323	12	12	866	261	12	866

Saturation Flow Module:														
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.65	0.65	0.65	0.84	0.84	0.84	0.16	0.93	0.93	0.49	0.90	0.90	0.49	0.90
Lanes:	0.48	0.42	0.10	0.18	0.39	0.43	1.00	1.93	0.07	1.00	1.54	0.46	1.00	1.54
Final Sat.:	592	516	120	293	628	677	298	3395	125	935	2622	792	935	2622

Capacity Analysis Module:														
Vol/Sat:	0.25	0.25	0.25	0.20	0.20	0.20	0.08	0.10	0.10	0.01	0.33	0.33	0.01	0.33
Crit Moves:	***													
Green Time:	47.2	47.2	47.2	47.2	47.2	47.2	62.8	62.8	62.8	62.8	62.8	62.8	62.8	62.8
Volume/Cap:	0.58	0.58	0.58	0.46	0.46	0.46	0.14	0.17	0.17	0.02	0.58	0.58	0.14	0.17
Delay/Veh:	25.5	25.5	25.5	22.8	22.8	22.8	11.4	11.2	11.2	10.3	15.5	15.5	10.3	15.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.5	25.5	25.5	22.8	22.8	22.8	11.4	11.2	11.2	10.3	15.5	15.5	10.3	15.5
LOS by Move:	C	C	C	C	C	C	B	B	B	B	B	B	B	B
HCM2kAVGQ:	8	8	8	8	8	8	1	3	3	0	13	13	0	13

Note: Queue reported is the number of cars per lane.

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Existing Plus Cumulative Plus Project Conditions

SD Courthouse Study

AM Peak Period

Project Trips Report

am project

Node Intersection	Northbound		Southbound		Eastbound		Westbound	
	L	T	L	T	L	T	L	T
Zone #1: Parking 1								
101 Ash / Union	2	1	0	0	0	0	0	115
102 Ash / Front	0	0	0	0	0	0	0	57
103 1st / A	0	0	0	0	0	7	0	0
104 B / State	0	0	0	0	0	0	0	0
105 B / Union	0	53	0	0	0	0	0	0
106 B / Front	0	0	0	0	0	0	0	0
107 C / State	0	0	0	0	0	0	0	0
108 C / Union	0	53	0	0	0	0	0	0
109 Broadway / St	0	0	0	0	0	8	0	1
110 Broadway / Un	0	25	0	3	1	8	0	0
Zone #2: Parking 2								
101 Ash / Union	0	1	0	0	0	0	0	58
102 Ash / Front	0	0	0	29	0	0	0	29
103 1st / A	0	3	0	0	3	0	0	0
104 B / State	1	10	0	0	0	0	0	65
105 B / Union	0	0	0	2	8	0	7	6
106 B / Front	0	0	0	0	58	0	0	0
107 C / State	0	56	0	0	0	136	0	0
108 C / Union	0	0	0	0	7	0	0	0
109 Broadway / St	0	0	0	0	0	8	0	0
110 Broadway / Un	25	0	0	3	3	2	0	0
Zone #5:								
101 Ash / Union	0	0	0	0	0	0	0	-1
102 Ash / Front	0	0	0	-38	0	0	0	-2
103 1st / A	0	0	-19	0	0	-70	0	0
104 B / State	0	0	0	0	0	0	0	0
105 B / Union	0	-17	0	0	-2	0	0	0
106 B / Front	0	0	0	0	-2	0	0	0
107 C / State	0	0	0	0	0	0	0	0
108 C / Union	0	-17	0	0	-2	0	0	0
109 Broadway / St	0	0	0	0	0	0	-5	0
110 Broadway / Un	0	-17	0	0	-2	0	0	-1